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ELEMENTS

OF

MENTAL PHILOSOPHY,

Thomas C. Upham
BY THOMAS C. UPHAM,

**PROFESSOR OF MORAL AND MENTAL PHILOSOPHY AND INSTRUCTOR
OF HEBREW IN BOWDOIN COLLEGE.**

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MENTAL PHILOSOPHY.

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INTRODUCTION.

CHAPTER FIRST.

UTILITY OF MENTAL PHILOSOPHY.

§. 1. *Objects of this science and objections against it.*

MAN is not a simple, but a combined or complex existence, made up of mind and matter. It belongs to mental Philosophy to make inquiries into his mental part, into that characteristic element in his formation, which thinks and combines, which feels and wills, hates and loves. And as mind is higher than matter, a less gross and more excellent existence, it might be supposed, that the study of it would be pursued with the greatest alacrity and delight.

Nor has this supposition been altogether disappointed ; the study of the intellect and of the passions has never, in any stage of society, been wholly neglected ; and yet some objections have been made to this pursuit, which, although more specious than solid, have lessened the ardour, to which it is entitled.

§. 2. *Its supposed practical inutility.*

Among other objections, not sufficiently weighty to exact an examination at present, it has sometimes been said, and with some degree of plausibility, that Mental Philoso-

phy is practically useless.—In studying this department of science, we are supposed in the erroneous opinion, which has been mentioned, to learn in a scientific form only what we have previously learnt from nature ; we acquire nothing new, and the time, therefore, which is occupied in this pursuit, is mispent.

All persons, however ignorant, know what it is, to think, to imagine, to feel, to perceive, to exercise belief. All persons know the fact, without being formally taught it, that memory depends on attention. When asked, why they have forgotten things, which occurred yesterday or last week in their presence, they think it a sufficient answer to say, that they did not attend to them. All classes of men are practically acquainted with the great principle of association. The uneducated groom, who feeds his horses to the sound of the drum and bugle, as a preparatory training for military service, discovers a knowledge of it not less than the philosopher. The vast multitude, with scarcely a single exception, understand the complexity and strength of the passions ; the power, and the aids, and the practice of reasoning.

From some facts of this kind, which may safely be admitted to exist to a certain extent, the opinion has arisen of the practical inutility of studying Mental Philosophy as a science.

§. 3. *Its supposed practical inutility answered.*

If, however, such facts as these be admitted to be a valid objection in application to this study, the same objection evidently exists to the study of other sciences, for instance, Natural Philosophy. It is remarked of savages, that they gain an eminence before they throw their missile weapons, in order by the aid of such a position to increase the momentum of what is thrown. They do this without any scientific knowledge of the accelerating force of gravity. The sailor, who has perhaps never seen a mathematical diagram, practically understands, as is evident from the mode in which he handles the ropes of the vessel, the composition and resolution of forces. In a multitude of in-

stances, we act on principles, which are explained and demonstrated in some of the branches of Natural Philosophy. We act on them, while we are altogether ignorant of the science. But no one, it is presumed, will consider this a good excuse for making no philosophical and systematic inquiries into that department of knowledge.

But without contenting ourselves with the answer, which has now been given to the objection, that the study, upon which we are entering, is of no practical profit, some remarks will be made, more directly and positively showing its beneficial results.

§. 4. *Mental Philosophy tends to gratify a reasonable curiosity.*

If it were true, that the practical good results of a prosecution of this science are exceedingly inconsiderable, it might, nevertheless, be properly studied, because a natural and reasonable curiosity is in this way gratified. The botanist examines the seed of a plant and its mode of germination, the root and the qualities by which it is fitted to act as an organ of nutrition and support, the structure of the stem, and the form of the leaves. The mineralogist inquires into the properties, the constituent parts, and the relations of the various mineral masses, which enter into the formation of the earth's surface. And whatever opinion may exist as to the amount of practical benefit resulting from inquiries into these departments of science, they are justly considered as exceedingly commendable, and as suitable to the inquisitive turn of an intellectual being. In other words, the constitution of the mind itself, which in its very nature is restless and inquisitive, is regarded as a pledge of the propriety of such inquiries, independently of their subserviency to the indirect increase of human happiness.

But it is certainly not too much to say, that the soul of man presents a nobler subject of examination, than the inanimate masses of matter beneath his feet, or the flowers, that open and bloom around him. In whatever points we may hereafter compare them, we shall have frequent occasion to observe, that spirit possesses the preeminence

over that, which is immaterial. Matter and mind are utterly different in their nature : although in making the remark here, we anticipate the views, by which it is authorized. Our experience teaches us, that the former is compounded and separable into parts ; but we know the latter to be simple and inseparable. Being inseparable, it is not subject to the change of dissolution, but continues unaltered in its nature amid the rapid decays of material existence. And what is a further mark of its superior claims on our attention, the mind is subject to a law of increase ; it is not stationary, but is always advancing, always strengthening its susceptibilities of knowledge.

§. 5. *Further grounds for this view.*

The remark last made is worthy of particular consideration.—Look at man in the beginning of his existence. The thoughts and feelings of the infant mind are few indeed, but it is able, in the creative expansion of its powers, to multiply them both in their simple and complex forms, to an immeasurable extent.—In various ways does this appear ; in every thing, which admits of the application of mind ; in the arts, sciences, and social order.

Writers say, that man is born in society, and it is true, that he is so. But what is his situation in the introductory period of his life ! If he be an object of love, he is also an object of solicitude and pity ; he is utterly under the direction of another, unable at first to guide his own footsteps. But in a few years, such has been the growth of his intellect, that he, who but yesterday could not govern himself, tomorrow enacts the constitution and laws of empires ; he, who but yesterday knew no social principle but that of simple dependence on his mother, tomorrow comprehends the philosophy of Montesquieu, and has become the legislating intellect of the world.

Nor is this growth of mind, this wonderful expansion of the intellect limited to any one class of objects to the exclusion of others.—Mark the childhood of man in his earliest inquiries into nature. At first he is filled with astonishment at beholding the clustering beams of light, that

are reflected from a piece of metal. Pleased, but not satisfied, as the mind acquires strength, he traces the direction and the rapidity of its progress from planet to planet, till he finds its source in the sun, whose form, and magnitude, and revolution he is able to estimate. At first, too feeble of judgment for the simple operation of combining syllables into words, he shortly reads the Principia of Newton, and combines together and interprets that physical language of the Universe, in which the presiding intelligence of the Almighty is expressed.—Such being the nature of the human mind, so vastly capacious in its progress, though weak indeed in its beginning, it is, in itself considered, a most rational and worthy object of examination.

§. 6. *Mental Philosophy teaches us where to limit our inquiries.*

But there is another view of the mind, necessary to be taken, which is somewhat different from the foregoing, although equally true.—That the human mind possesses a natural energy and is rapidly progressive is certain; but it is not less so, that it has its boundaries. And here we find another of the good results of a knowledge of Mental Philosophy, that we are taught by it to limit our inquiries to those subjects, to the investigation of which our capacities are equal and are adapted.

The Supreme Being is an all pervading mind, a principle of life, that has an existence in all places and in all space, and whose intelligence is like his omnipresence, acquainted with all things. But man, his creature, is made with an inferior capacity; he knows only in part, and it is but reasonable to suppose, that there are many things, which he will never be able to know. But, although it be justly admitted, that man is subordinate to the Supreme Being and is infinitely inferior to Him, his Maker has kindly given him aspirations after knowledge, with the power of satisfying, in some measure and under certain limitations, such aspirations. If, therefore, man be a being, formed to know, and there be, moreover, certain restrictions, placed upon the capacity of knowledge, it is highly impor-

tant to ascertain the limitations, whatever they may be, which are imposed. Nor is this always an easy thing to be determined. There is oftentimes a difficulty in ascertaining precisely the boundary, which runs between the possibility and the impossibility of knowledge, but whenever it is ascertained, there is an indirect increase of mental ability by means of the withdrawal of the mind from unprofitable pursuits, in which there is an expense of effort without any remuneration.

The necessity of ascertaining what things come within the reach of our powers and what do not, was a thought which laid the foundation of Mr. Locke's Essay on the Human Understanding.

§. 7. *Remarks of Mr. Locke on this point.*

"Were it fit to trouble thee with the history of this Essay (he remarks in the Epistle to the reader) I should tell thee, that five or six friends meeting at my chamber and discoursing on a subject very remote from this, found themselves quickly at a stand by the difficulties, that arose on every side. After we had awhile puzzled ourselves without coming any nearer a resolution of those doubts, which perplexed us, it came into my thoughts, that we took a wrong course, and that before we set ourselves upon inquiries of that nature, it was necessary to examine our own abilities, and see what objects our understandings were or were not fitted to deal with. This I proposed to the company, who all readily assented, and thereupon it was agreed, that this should be our first inquiry."

Such were the sentiments on this subject of a man, who has probably contributed more largely than any other individual to help us to the correct understanding of the mind ; and whose writings, such is their singular originality and acuteness, can hardly be too strongly recommended for perusal.

§. 8. *Helps us in the correction of mental errors.*

A third advantage, resulting from the study of the Philosophy of the Mind, is, that it teaches us in many cases

to correct whatever deficiencies or errors may exist in our mental constitution.

In our present state of imperfection, while we are found to experience various kinds of bodily evils, we are not exempt from those of the mind ; and we know not, that it can any more excite surprise, that some people exhibit mental distortions, than it can, that we daily see not only the healthy and the well-formed, but the maimed, the halt, and the blind. If then it be asked, how are these various mental defects to be remedied, the answer is obvious, that we should act in regard to the mind, as we do in promoting the restoration of the body ; we should commit the business of ascertaining a remedy to those, who are in some good degree acquainted with the subject and with the nature of the disease. A physician, altogether ignorant of the anatomy and physiology of the human system, would be poorly fitted to restore a fractured limb, or subdue the ravages of a fever. But if knowledge be necessary, in order to heal the weakness of the body and restore it to its proper soundness and beauty, it is not less important in the restoration of analogous evils in the mental constitution.

In looking round to see, whose minds are disordered, and whose are in a sound and healthy condition, we notice, for example, that some persons are troubled with a very weak memory. We have a very candid confession on this point in the writings of Montaigne. He informs us, that he did not trust to his memory. " I am forced (says he) to call my servants by the names of their employments, or of the countries where they were born, for I can hardly remember their proper names ; and if I should live long, I question whether I should remember my own name." It appears, however, from his acquaintance with the principles of the ancient philosophers that he had not much reason to complain, except of his own inattention to this valuable mental susceptibility. He remembered principles, he could keep in recollection the outlines of the sciences, but could not so well remember insulated facts, especially if they related to the occurrences of common

life. This peculiarity in the operations of the memory is not unfrequently found among men of letters, especially if they possess a vivid imagination. But it must be considered a mental defect ; one, which it is not only important to understand, but to try to remedy.

Montaigne is a striking instance of failure in one of the varieties of memory, and others fail equally in the power of reasoning, that is, in forming judgments or conclusions by combining together a number of consecutive propositions. And this happens from a variety of causes, as from weakness of attention, or the influence of prejudices, or an ignorance of the nature and sources of evidence, or from other causes, which may be guarded against and controlled. In other cases the mind is thrown into confusion in consequence of such exceeding vividness in the conceptions, as to lead one to mistake the mere objects of thought for real external objects. And again we have the still more formidable evils of idiocy in its various forms of origin, and of partial and total insanity.

Since then it must be admitted, that there are diseases and distortions of the mind no less than of the body, and that we cannot expect a restoration from those evils without an intimate acquaintance with the state and tendencies of our intellectual and sentient powers, such an acquaintance becomes exceedingly desirable.

§. 9. *Is a help to those, who have the charge of early education.*

This study, in the fourth place, furnishes many very valuable hints to those, who have the charge of early education. It is well known that children and youth adopt almost implicitly the manners and opinions of those, under whom they happen in Providence to be placed, or with whom they much associate, whether they be parents, instructors, or others.

Let it, therefore, be remembered, that passions both good and evil may then rise up and gain strength, which it will afterwards be found difficult to subdue. Intellectual operations may at that period be guided and invigora-

ted, which, if then neglected, can never be called forth to any effective purpose in after life. Associations and habits of various kinds may then be formed, which will defy all subsequent attempts at a removal, and will follow the subjects of them down to the grave. In a word, the soul may be trained, in no small degree, either to truth or falsehood, to virtue or vice, to activity or sluggishness, to glory or infamy.

When we take these things into view, and when we further recollect the frequency of characteristic, if not original differences in intellectual power and inclination, no one certainly can be considered properly qualified for the great undertaking of a teacher of youth, who has not formed a systematic and philosophic acquaintance with the principles of the mind.

§. 10 *Has a connection with other departments of science.*

It is to be considered in the fifth place, that this department of science has an intimate connection with others, which are of great importance; and this connection may be regarded as increasing the urgency of attending to it.

For instance, Mental philosophy has an intimate connection with Moral. In the latter science we bring under consideration injuries, benefits, the nature and obligation of contracts, and the various duties of men; but such inquiries would be exceedingly fruitless without a thorough acquaintance with the emotions and passions, and with other modifications, both simple and complex, of the mental principle.

The philosophy of the mind has also a close connection with the most important applications of Criticism and Taste. It would not be possible to give any rational account of the excellencies or defects of a poem, painting, edifice, or other work of art, without a knowledge of it. For, although we often call such works beautiful and sublime, it is certain, that they cannot possess the qualities of beauty or sublimity, independently of our mental frame; and we never apply those epithets to them, except it be with reference to certain feelings excited within us.

Again, Mental philosophy is closely connected with the science and practice of Oratory. We sometimes hear the science of the mind designated as the philosophy of human nature, and nothing certainly is more common than the remark, that a knowledge of human nature is essential to the orator. With how much greater directness and strength he applies his powers of reasoning, when he understands the principles, on which the mind operates in every reasoning process ! With how much greater confidence he attacks prejudices, and rouses or allays the passions, when he has thoroughly meditated the passions, and the various influences, by which our judgments are biassed !

It will be found also on examination, that the philosophy of mind has a real relation, either direct or indirect, to various other departments of knowledge. Indeed, so far as it examines primary propositions, and the grounds and instruments of belief, it may justly be considered as laying the foundation of all science and all knowledge whatever.

§. 11. *Mental science is a guide in our intercourse with men.*

And let it be further noticed, in connection with this subject, that our intercourse with men, in the ordinary concerns and enjoyments of life, is truly and properly an intercourse with minds. In order to render this intercourse agreeable and profitable, it is necessary to be acquainted with the laws of the mind. It is undoubtedly the duty of every man, to increase, as far as lays in his power, the sum of human happiness ; but without such acquaintance he will often touch unadvisedly some train of thought, some secret feeling, some casual connection, that will produce deep unhappiness. But if he combine with a benevolent disposition a suitable knowledge of our mental nature, his touch, like that of the skilful musician, will extract from those, with whom he mingles in the intercourse of life, the concord of just thoughts and kindly feelings, which is the most pleasing of all earthly harmonies.

But there is another point, on which men have been most unjust and cruel to each other, and in respect to which they will find in mental philosophy a clear intimation of their error, and an implied and stern rebuke of their injustice; we have reference to the hostility of those, who happen to embrace different opinions. Many unfortunate men have been exiled and out-cast from society; many have been thrown into dungeons; many have been broken on the rack; many have died by the fire and famine and the sword; merely because they did not believe as those, who possessed the power thus to oppress them. But the philosophy of mind teaches us, that belief has its laws; that there is no necessary connection between suffering and a change of opinion; and whispers in the ears of those, who have the wisdom to understand it, that the only rebukes should be evidence; the only engines of torture, arguments; and the only persecution and warfare, the zealous communication of knowledge.

§. 12 *Illustrates the nature and wisdom of the Creator.*

But we leave these and all other considerations, tending to show the utility of the science of the human mind, with the single reflection further, that it helps to illustrate the nature and wisdom of the Infinite Mind.

I.—It throws light on the nature of the Supreme Being. All those ideas, which we form of God, are only new applications and extensions of certain ideas, which we previously form in respect to ourselves. The soul, approaching in its nature nearer to Him than any thing else, which is the direct subject of our knowledge, is, in some sort, the medium, by which we mount up, and are able to form true conceptions of the nature of the universal Author. Hence, in studying mind even on the limited theatre of humanity, we are indirectly studying the Supreme Being, since God is the original, indispensable, and all-pervading mind, and no analogy even in the slightest degree can be pointed out between his nature, and that of any thing else on earth. Accordingly we find universally in nations, where the intellect is degraded, God is degraded

also ; where there are no powers of abstraction, every thing assumes a massive and material form ; where there is no thorough contemplation of the divinity within, there is no true knowledge of the Divinity without. And these degraded men are so in love with their grovelling and unintelligent conceptions, that they will show you the spirituality of the Omniscience, reduced to a visible form, and cased up in the brodered work of Egypt, the gold of Tyre, and the feathers of the South Sea Islands.

II. The knowledge of the human mind is not only the basis of true conceptions of the nature of the Divine Mind, but it affords also the most striking exemplification of some of his attributes, particularly his wisdom.

We are frequently referred in theological writings to the works of creation, as a proof of the Creator's wisdom ; and the remark has been made, not without reason, that the "*stars teach as well as shine.*" But of all those created things, which come within the reach of our direct examination, the human mind is that principle, which evinces the most wonderful construction, which discloses the most astonishing movements. There is much to excite our admiration of the Divine foresight in the harmonious movements of the planetary orbs, in the rapidity of light, in the process of vegetation ; but still greater cause for it in the principle of thought, in the inexpressible quickness of its operations, in the harmony of its laws, and in the greatness of its researches. How striking are the powers of that intellect, which, although it have a local habitation, is able to look out from the place of its immediate residence, to pursue its researches among those remote worlds, which journey in the vault of heaven, and to converse both with the ages past and to come !

It ought not to be expected that we should be intimately acquainted with a principle possessing such striking powers, without some reverential feelings towards Him, who is the author of it.

§. 13. *Of the mental effort necessary in this study.*

In concluding these remarks on the utility of the Phi-

losophy of the Mind, it ought not be concealed, that our early intellectual habits present an obstacle to the easy and ready prosecution of it. We are so formed, that we naturally give our attention first to external things. The varieties of color and sound, the pleasures of taste and touch are continually giving us new intimations, and drawing the soul incessantly out of itself to the contemplation of the exterior causes of the perceptions and emotions, by which it is agitated. Hence, when we are called to look within, and as the Arabians sometimes say, '*to shut the windows, in order that the house may be light,*' we find it to be a process, to which we are unaccustomed, and, therefore, difficult.

Although the direct mental effort be not greater in this, than in some other departments of science, it is, in consequence of the circumstance just mentioned, exceedingly painful to some, and certainly requires patience and resolution in all. And perhaps this is one cause of the unfavourable reception, which this department of knowledge has often met with.

But the advantages attending it are so numerous, it is to be hoped, they will overcome any disinclination to the necessary mental exertion. The fruits of the earth are purchased by the sweat of the brow, and it has never been ordered, that the reverse of this shall take place in the matters of knowledge, and that the fruits of science shall be reaped by the hands of idleness. No man has ever become learned without toil; and let it be remembered, if there be many obstacles in the acquisition of any particular science, that he, who overcomes a multiplication of difficulties, deserves greater honour than he, who contends only with a few.

CHAPTER SECOND.

IMPLIED OR PRIMARY TRUTHS.

§. 14. *Importance of certain preliminary statements in mental philosophy.*

It is often highly important, in the investigation of a department of science, to state, at the commencement of such investigation, what things are to be considered as preliminary and taken for granted, and what are not. If this precaution had always been observed, which, where there is any room for mistake or misapprehension, seems so reasonable, many useless disputes would have been avoided, and the paths to knowledge would have been rendered more direct and easy, instead of being prolonged and perplexed.

It is impossible to proceed with inquiries in the science of MENTAL PHILOSOPHY, as it will be found to be in almost every other, without a proper understanding of those fundamental principles, which are necessarily involved in what follows. And it will, accordingly, be the object of this chapter to endeavour to ascertain them ; keeping in mind always, that much circumspection is requisite, lest there should be any unnecessary assumptions. The elementary truths, which we have reference to, are few in number, and nothing at least shall be assumed, merely to avoid the trouble of investigation.

§. 15. *Nature of such preliminary statements.*

Those preliminary principles, which may be found necessary to be admitted as the antecedents and condi-

tions of all subsequent inquiries, will be called, for the sake of distinction and convenience, PRIMARY TRUTHS.—But what are these? Or how do we know them?

According to the view of this subject, taken by Butler, who has expressly written upon it, and is approved in what he says by Stewart and other metaphysical writers, they are such, and such only, as can neither be proved, nor refuted by other propositions of greater perspicuity. And this is not only a succinct, but a satisfactory account of them, since, if there were other propositions, into which they could be resolved, and by means of which they could be made clearer, then they could no longer be regarded as primary, but those other clearer propositions would have that character.

But it may be asked again, are there any propositions of this kind? Are there any so clear, that the great instrument of human reasoning cannot render them more perspicuous? Can there not be a complete action of the human mind in all its parts without the laying down of any antecedent truths whatever, as auxiliaries in its efforts after knowledge?—The answer to such questions, however formidable they may at first appear, is not far off; it is furnished by the nature of reasoning, and by every day's experience. Every man, who investigates at all, often experiences doubts in his inquiries. He accordingly endeavours to render the propositions, which are of this character, clearer by argument. He goes on from step to step from one proposition to another; but, unless he at last finds some truth utterly too clear to be rendered more so by reasoning, he must evidently proceed, adding deduction to deduction without end. Reasoning is in fact a succession of relations; but there can be no feeling of relation, where there is but one object of contemplation; something, therefore, must, from the nature of the case be assumed.

§ 16. *Of the name or designation given them.*

The mode of expression, which is employed to indicate the propositions, which are under consideration, is not

known; but is made use of by a number of judicious writers. They are called **PRIMARY TRUTHS**; and without doubt the phraseology is good. Such propositions are termed, in the first place, **TRUTHS**, since they are forced upon us, as, as it were, by our very constitution. They exist as surely as the mind exists, where they have their birth-place; they as certainly and as strongly control the convictions of men, as the demonstrations of geometry; and not of one man merely, or any particular set of men, but of all mankind; for the few, who pretend to reject them in speculation, constantly retract and deny such rejection of them in their practice. And yet they are not the result of calculation; they are not the deductions of reasoning; but rather the natural and unfailing concomitants of humanity.

With sufficient reason also, are the propositions in question called **PRIMARY**; because, as would seem to follow from the very definition of them, they are the propositions, into which all reasoning ultimately resolves itself, and are necessarily involved and implied in the various investigations, of which the mind is capable, whether they relate to the great subject before us, or to others. As has been remarked, there cannot possibly be a process of reasoning, without some first principle or admitted truth, from which to start.

§. 17. *Primary truth of personal existence.*

The **PRIMARY TRUTH**, which we are naturally led to consider first, is that of the reality and certainty of our personal existence. The proposition, *that we exist*, is a sort of corner stone to every thing else; the foundation of our knowledge; the place and the basis, from which the edifice must rise. This fundamental truth we admit.

The celebrated Des Cartes, as if he could by a mere volition suspend the unalterable dictates of nature, formed the singular resolution, not to believe his own existence, until he could prove it. He seemed to forget, that there are grounds of belief, antecedent to reasoning, and equally

authoritative.—He accordingly reasoned thus ; *cogito, ergo sum, I think, therefore, I exist.*

Buffier makes the remark in respect to such sceptical persons, that, if they doubt of every thing, it must still remain true, that they exist, as they cannot even doubt without existing. At any rate Des Cartes was as near the truth, when he laid down the premises, as when he drew the conclusion. His argument, however conclusive he might deem it, evidently involves a PETITIO PRINCIPII or begging of the question. The Latin word *cogito*, which is not only a verb but includes the pronoun of the first person, and undeniably embraces both subject and predicate, is equivalent, to make the least of it, to the proposition, *I am a thinking being, ;* and *ERGO SUM* may be literally interpreted, *therefore, I am in being.* His premises had already implied, that he existed as a thinking being, and it is these very premises, which he employs in proof of his existence. The acuteness, which has been generally, and without doubt justly attributed to Des Cartes, evidently failed him in this instance. His argument was unsuccessful, and no one, who has attempted to prove the same point, has succeeded any better.

This being the case, it is necessary to take ground altogether different from that, which has been chosen by Des Cartes and his followers, and not to risk the defence of a principle so important, where it clearly can never be sustained. We regard, therefore, the proposition, *THAT WE EXIST*, a primary truth ; in other words, it is a proposition, antecedent to reasoning, but which, notwithstanding, fully and perfectly secures our belief. Nothing, which comes within the reach of the human mind, is more clearly defined to its perception, more thoroughly controlling and operative, and more raised above cavils and scepticism, whether rational or irrational, than this.

§. 18. *Occasions of the origin of the idea or belief of personal existence*

It remains, however, a distinct subject of inquiry, Under what circumstances this elementary belief arises?—

And in answer to this inquiry we may say with abundant confidence, if it be not the earliest, it is at least among the earliest notions, which the mind is capable of forming. A kind Providence has not conceded to a feeling, so essential to our whole mental history, a dilatory, and late appearance. But that same Providence has given a place as well as a time, an occasion as well as a period of its formation ; and although it may be impossible for us ever to ascertain that occasion with certainty, we may at least conjecture.

We look, therefore, in our meditations on this topic, at man in his first existence. We see him called forth from a state, where there was neither form nor knowledge, neither light nor motion, neither mind nor matter ; endowed with such capabilities of thought and action, both internal and external, as his Creator saw fit to give. Thus brought into being, and thus fitted up for his destined sphere, we will suppose, that some external object is for the first time presented to the senses. The result of this is, that there is an impression made on the senses ; and then at once there is a change in the mind, a new thought, a new feeling. Although, as already suggested, there is room for different conjectures here, there is much reason to believe, that this is the true occasion of the origin of the belief in question.* The first internal experience, the earliest thought or feeling is immediately followed by the notion of personal or self existence, as the subject of this new thought or feeling. And this idea or conviction of

* The view, which is here given, is the same that is proposed by Reid and Stewart, whose opinions on any point of mental philosophy are entitled to great weight. The latter writer informs us, in the Introduction to his Philosophy of the Human mind, that every man is impressed with an irresistible conviction, that all his sensations, thoughts, and feelings belong to one and the same being, which he calls *himself*. And again in Chapter first of the same Work, he gives us to understand, that a person, having a particular sensation for the first time, acquires the knowledge of two facts at once ; that of the existence of the sensation, and that of his own existence as a sentient being.

personal existence, which arises at this very early period, is continually suggested and confirmed in the course of the successive duties, and enjoyments, and sufferings of life.

Such has commonly been supposed to be the origin of the belief in question. We may as well suppose it to come into being in connection with the first act of the mind, as with any subsequent act; although with less distinctness and strength, than afterwards. But whether this account of the origin of the notion of our personal existence be the true one or not, we may still hold to the fact of the belief itself, as something beyond doubt. We may also regard it as necessarily resulting from our mental constitution, and as wholly inseparable from our being.

Malebranche in his *Search after Truth* speaks much in commendation of what he has termed the spirit of doubting. But then he bestows this commendation with such limitations as will prevent those evils, which result from too freely giving up to a sceptical spirit.

"To doubt (says he) with judgment and reason, is not so small a thing as people imagine, for here it may be said, that there's a great difference between doubting and doubting. We doubt through passion and brutality, through blindness and malice, and, lastly, through fancy, and only because we would doubt. But we doubt also with prudence and caution, with wisdom and penetration of mind. Academics and atheists doubt upon the first grounds, true philosophers on the second. The first is a doubt of darkness, which does not conduct us into the light, but always removes us from it." (B. I. ch. 20.)

We may remark in conformity with this distinction of Malebranche, that the doubting of those over-scrupulous inquirers, who demand a formal proof of their own existence, is of that kind, to which he so justly objects. Scepticism on that subject is truly a doubt of darkness, which does not conduct us into the light, but always removes us from it.

§. 19. *Primary truth of personal identity.*

The second of those preliminary truths, which we

term primary, is the proposition of our Personal Identity'—If the consideration of our personal existence naturally come first in the order of time, that of the truth now before us is not secondary in point of importance. We cannot dispense with either, without unsettling the grounds of inquiry and belief, and barring the access to all knowledge whatever.

IDENTITY is synonymous with sameness, and is the name of a simple state of mind. Although, therefore, its meaning is as clear as that of other simple ideas, and every body is supposed to understand it, it is not susceptible of definition. The term is applied to various objects, and among others to men.—The word PERSONAL implies Self, and personal identity is, therefore, the identity of ourselves. But the term *self* is complex, embracing both mind and matter, and hence we are led to consider the distinct notions of mental and bodily identity.

I. MENTAL IDENTITY ;—By this phrase we express the continuance and oneness of the thinking principle merely. The soul of man is truly an unit. It is not like matter separable into parts ; no one being ever conscious of a want of oneness in thought and feeling. It may bring, from time to time, new susceptibilities into action ; but its essence is unchangeable. That, which constitutes it a thinking and sentient principle, in distinction from that, which is unthinking and insentient, never deserts it, never ceases to exist, never becomes other than what it originally was.

II. BODILY IDENTITY ;—By these expressions we mean the sameness of the bodily shape and organization. This is the only meaning we can attach to them, since the materials, which compose our bodily systems, are constantly changing. The body is not an unit in the same sense the soul is. It was a saying of Seneca, that no man bathes twice in the same river ; and still we call it the same, although the water within its banks is constantly passing away. And in like manner we ascribe identity to the human body, although it is subject to constant changes, mean-

ing by the expressions, as just remarked, merely the sameness of shape and organization.

III PERSONAL IDENTITY ;—This form of expression is more general than either of those, which have been mentioned. It has reference to both mind and matter, as we find them combined together in that complex existence, which we term man or person. It is equivalent to what is conveyed by the two phrases of mental identity and bodily identity. But it is evident we cannot easily separate the two, when speaking of men. And accordingly, when it is said, that any one is conscious of, knows, or has a certainty of his personal identity, it is meant to be asserted, that he is conscious of having formerly possessed the powers of an organized, animated, and rational being, and that he still possesses those powers. He knows, that he is a human being now, and that he was a human being yesterday, or last week, or last year.—There is no mystery in this. It is so plain, no one is likely to misunderstand it, although we admit our inability to give a definition of identity.

§. 20. *Reasons for regarding this a primary truth.*

If personal identity be a primary truth, it is antecedent to argument, and is independent of it.—What grounds are there, then, for regarding it as such ?

In the first place, the mere fact, that it is constantly implied in those conclusions, which we form in respect to the future from the past, and universally in our daily actions, is of itself a decisive reason for reckoning it among the original and essential intimations of the human intellect. On any other hypothesis we are quite unable to account for that practical recognition of it in the pursuits of men, which is at once so early, so evident, and so universal.

The farmer, for instance, who looks abroad on his cultivated fields, knows, that he is the same person, who, twenty years before, entered the forest with an axe on his shoulder, and felled the first tree. The aged soldier, who recounts at his fireside the battles of his youth, never once

doubts, that he was himself the witness of those sanguinary scenes, which he delights to relate. It is altogether useless to attempt either to disprove or to confirm to them a proposition which they believe and know, not from the testimony of others or from reasoning, but from the interior and authoritative suggestion of their very nature; and which, it is sufficiently evident, can never be eradicated from their belief and knowledge, until that nature is changed.

A SECOND circumstance in favour of regarding the notion of personal identity, as an admitted or primary truth, is, that men cannot prove it by argument if they would; and if they do not take it for granted, must forever be without it. The propriety of this remark will appear on examination.—There evidently can be no argument, properly so called, unless there be a succession of distinct propositions. From such a succession of propositions, no conclusion can be drawn by any one, unless he be willing to trust to the evidence of memory. But memory involves a notion of the time past, and whoever admits, that he has the power of memory, in however small a degree, virtually admits, that he has existed the same at some former period, as at present.

The considerations, which we have now particularly in view, and which are greatly worthy of attention in connection with the principle under examination, may with a little variation of terms be stated thus.

Remembrance, without the admission of our personal identity, is clearly an impossibility. But there can be no process of reasoning without memory. This is evident, because arguments are made up of propositions, which are successive to each other, not only in order, but in point of time. It follows, then, that there can be no argument whatever, or on any subject, without the admission of our identity, as a point, from which to start. What then will it avail to attempt to reason either for or against the views, which are here maintained, since in every argument which is employed, there is necessarily an admission of the very thing, which is the subject of inquiry.

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§. 21. *Of the existence of matter.*

In assuming the truth of self-existence and of personal identity, it will be observed, that there has necessarily been an admission of the existence both of mind and matter. As both are employed in the formation or constitution of man in his present state, it is not easy to admit the existence of one, and deny that of the other. We naturally and necessarily think of ourselves not as mind only, but as material.

And accordingly, in whatever follows, the true and actual existence of both is no where doubted. But this admission, it should be added, does not preclude inquiries hereafter into the grounds of our belief in both cases. The evidence of consciousness and of the senses in particular will afford occasion for such inquiries.

Evidently some elementary principles must be granted ; otherwise we can never advance. But when we have once started, and have made progress, we may then return ; examine, under new points of view, the successive steps, which have been taken ; and inspect and try the soundness of those primary propositions at the foundation of the whole.

§. 22. *There are original and authoritative grounds of belief.*

Supposing men actually to exist, and to be conscious of the continuance and sameness of their existence, we are next to enter into the interior of their constitution, and to inquire after such elements of intelligence, and action, as are to be found there. The next proposition, therefore, which is to be laid down as fundamental and as preliminary to all reasoning, is, that there are in men CERTAIN ORIGINAL AND AUTHORITATIVE GROUNDS OF BELIEF.

Nothing is better known, than that there is a certain state of the mind, which is expressed by the term, BELIEF. As we find all men acting in reference to it, it is not necessary to enter into any verbal explanation. Nor would it be possible by such explanation to increase the clearness

of that notion, which every one is already supposed to entertain.—Of this belief, we take it for granted, and hold it to be in the strictest sense true, that there are original and authoritative grounds or sources; meaning by the term, *original*, that these grounds or sources are involved in the nature of the mind itself, and meaning by the term, *authoritative*, that this belief is not a mere matter of chance or choice, but naturally and necessarily results from our mental constitution, and is binding upon us.

Sometimes we can trace the state of the mind, which we term belief, to an affection of the senses, sometimes to consciousness, sometimes to that quick, internal perception, which is termed intuition, and at others to human testimony. In all these cases, however, the explanation, which we attempt to give, is limited to a statement of the circumstances, in which the belief arises. But the fact, that belief arises under these circumstances, is ultimate, is a primary law; and being such, it no more admits of explanation, than does the mere feeling itself.—And further, this belief may exist as really, and may control us as strongly, when we are unable to give a particular and accurate account of the circumstances, in which it may arise, as at other times. We find ourselves continually compelled to act upon it, when the only possible answer we can give, is, that we are human beings, or that we believe, because we find it impossible to do otherwise.

Many writers have clearly seen, and defended the necessity of the assumption, which has now been made. Mr. Stewart among others has expressed the opinion, (*HIST. DISSER. PT. I. §. II.*) that there is involved, in every appeal to the intellectual powers in proof of their own credibility, the sophism of reasoning in a circle or PETITIO PRINCIPII; and expressly adds, that, unless this credibility be assumed as unquestionable, the further exercise of human reason is altogether nugatory.

§. 23. *Primary truths having relation to the reasoning power.*

Man may be sure of the fact of his existence and of its

permanency; he may be possessed of grounds of belief to a certain extent, such as have been mentioned; and still we may suppose him incapable of reasoning. His knowledge would be greatly limited, it is true, without that noble faculty, but he would know something; his consciousness would teach him his own existence; his senses convey to him intimations of external origin; the testimony of others furnish various facts, that had come within their observation. But happily man is not limited to the scanty knowledge, which would come in by these sources alone; he can compare as well as experience; and can deduce conclusions.

But there is this worthy of notice, that the reasoning power, although it exists in man, and is a source of belief and a foundation of knowledge, is necessarily built upon principles, which are either known or assumed.—This is seen in the most common and ordinary cases of the exercise of this susceptibility. And it will be found also on examination, that one assumption may be resolved into another, and again into another, until we arrive at certain ultimate truths, which are at the foundation of all reasoning whatever. It is important, therefore, to inquire, what general assumptions, having particular reference to the reasoning power and absolutely essential to its action, are to be made.—And these will be found to be two in number; one having special relation to the past, and the other to the future.

§ 24 *No beginning or change of existence without a cause.*

The one, which has a relation to the past, and is the foundation of all reasonings, having a reference to any period antecedent to the present moment, may be stated as follows; that there is no beginning or change of existence without a cause.—This principle, like others which have been mentioned, we may well suppose to be universally admitted. When any new event takes place, men at once inquire the cause; as if it could not possibly have happened without some effective antecedent.

And such being the general and unwavering reception

of the principle before us, it would seem to follow clearly, that there are grounds for it in the human constitution. A reliance on any principle whatever, so firm and general as is here exhibited, is not likely to be accidental. And when we inquire what these grounds are, we shall not fail to come to the conclusion, that the proposition in question is supported by an original intimation or feeling, which is utterly inseparable from our mental nature, and which is made known to us by consciousness alone.

But some will ask, Is it certain, that we cannot arrive at this truth by a process of reasoning ?—And in reference to this inquiry, we see no ground for dissenting from the following remarks of Dr. Reid, which will appear the better founded, the more they are examined. Speaking on this subject, he says, “ I am afraid, we shall find the proof by direct reasoning extremely difficult, if not altogether impossible. I know of only three or four arguments, that have been urged by philosophers, in the way of abstract reasoning, to prove, that things, which begin to exist, must have a cause. One is offered by Mr. Hobbes, another by Dr. Samuel Clarke, another by Mr. Locke. Mr. Hume in his *Treatise of Human Nature* has examined them all ; and, in my opinion, has shown, that they take for granted the thing to be proved ; a kind of false reasoning, which men are very apt to fall into, when they attempt to prove what is self-evident.”*

The feeling or belief, therefore, which is implied in the proposition, that there is no beginning or change of existence without a cause, is an original one, directly resulting from our nature. Still it is in our power to give some account of the circumstances, in which it arises.

§. 25. *Occasions of the origin of the primary truth of effects and causes.*

The mind embraces the elementary truth, which we are considering, at a very early period. Looking round upon nature, which we are led to do more or less from the commencement of our being, we find every thing in mo-

*Reid's *Intellectual Powers*, Essay VI.

tion. Non-existence is converted into life; and new forms are imparted to what existed before. The human mind, which is essentially active and curious, constantly contemplates the various phenomena, which come under its notice; observing not only the events and appearances themselves, but their order in point of time, their succession. And it is led in this way to form the belief, (not by deduction but from its own active nature,) that every new existence and every change of existence are preceded by something, without which they could not have happened.

Undoubtedly the notion, as in many other cases, is comparatively weak at first, but it rapidly acquires unalterable growth and strength; so much so that the mind applies it without hesitation to every act, to every event, and to every finite being. And thus a foundation is laid for numberless conclusions, having a relation to whatever has happened in time past. It is true, that the verbal proposition, by which our belief in this case is expressed, is not always, nor even generally brought forward and stated in our reasonings on the past, but it is always implied.

This primary truth is an exceedingly important one. By its aid the human mind retains a control over the ages that are gone, and subordinates them to its own purposes. It is susceptible in particular of a moral and religious application. Let this great principle be given us, and we are able to track the succession of sequences upward, advancing from one step to another, until we find all things meeting together in one self-existent and unchangeable head and fountain of being. But there it stops. The principle will not apply to God, since He differs from every thing else, which is the object of thought, in being an existence equally without change and without beginning.

§. 26. *Matter and mind have uniform and fixed laws.*

It is necessary to assume also, particularly in connection with the reasoning power, that matter and mind have uniform and permanent laws.

This assumption, as well as the preceding, is accordant

with the common belief of mankind. All men believe, that the setting sun will arise again at the appointed hour, that the decaying plants of autumn will revive in spring, that the tides of ocean will continue to heave as in times past, and the streams and rivers to flow in their courses. If they doubted, they would not live and act, as they are now seen to do.

This belief in the uniformity and permanency of the laws of nature does not arise at once ; but has its birth at first in some particular instance ; then in others, till it becomes of universal application. In the first instance the feeling in question, which we express in various ways by the terms, anticipation, faith, expectation, belief, and the like, is weak and vacillating ; but it gradually acquires strength and distinctness. And yet this feeling, so important in its applications, is the pure work of nature ; it is not taught men, but is produced within them ; the necessary and infallible product and growth of our mental being ; a sort of unalienable gift of the Almighty to every man, woman, and child ; arising in the soul with as much certainty and as little mystery as the notions, expressed by the words, power, wisdom, truth, order, or other elementary states of the mind. It is true, it is an expectation or belief, directed to a particular object, and, therefore, is not easily susceptible of being expressed by a single term, as in the case of the ideas just referred to ; but the circumstance of its being expressed by a circumlocution does not render the feeling itself less distinct or real than others.—As, therefore, the strong faith, which men entertain, in the continuance of the laws of creation, is the natural and decisive offspring of that mental constitution, which God has given us, there is good ground for assuming the truth of that, to which this faith relates, and to regard it as a principle in future inquiries, that matter and mind are governed by uniform laws.

It may be further added, that it is not necessary to call the belief, which is at the foundation of this assumption, either an intuitive perception or an instinct, as some have done, but merely a thought, an idea, a state of the mind ;

since the only difference between this, and expectation or belief in other cases, results from the nature of the object, towards which it is directed, and the occasions, on which it arises ; and does not concern the nature of the feeling itself.

§. 27. *This primary truth not founded on reasoning.*

But perhaps it is again objected, that we can arrive at the great truth under consideration without assuming it as something ultimate, as something resulting from our constitution ; and that nothing more is wanting in order to arrive at it, than a train of reasoning.—The sun, it is said, rose to-day, therefore, he will rise to-morrow : Food nourished me to-day, therefore, it will do the same to-morrow ; The fire burnt me once, therefore it will again.

But it demands no uncommon sagacity to perceive, that something is here wanting, and that a link in the chain of thought must be supplied, in order to make it cohere. The mere naked fact, that the sun rose to-day, without any thing else being connected with it affords not the least ground for the inference, that it will rise again ; and the same may be said of all similar instances. Now the link, which is wanting in order to bind together the beginning and the end in such arguments as have been referred to, is the precise assumption, which has been made, and which is held to be as reasonable as it is necessary, because it is founded on an acknowledged, universal, and elementary feeling of our nature. And we may here affirm with perfect confidence, that, without making this assumption, the power of reasoning cannot deduce a single general inference, cannot arrive at so much as one general conclusion either in matter or mind.

But the moment we make the assumption, a vast foundation of knowledge is laid. Grant us this, (to which we are fully entitled by virtue of that elementary belief, which the Author of our being has uniformly called forth in the human mind in his appointed way,) that nature is uniform in her laws ; then give us the fact, that food nourished us to-day, or that the sun rose to day, or any other fact of

the kind, and it follows with readiness and certainty, that what has once been will be again.—The principle of the permanency and uniformity of the laws of nature is something antecedent to reasoning and not subsequent to it ; something beyond reasoning and not dependent on it ; one of its substantial and magnificent columns.

REMARK. The above mentioned primary truth and that of the preceding section are in fact the same. They are different only in being the two great and equal sections of a principle, which has no limits but those of the universe and eternity. In other words, one of them has exclusive relation to the past ; the other to the future ; the former to that which has been, and the latter to that which will be. And hence as the human mind cannot readily contemplate them under one point of view, they are for that reason considered separately.

§. 28. *Of the distinction between primary and ultimate truths.*

Such propositions or truths, as are here called PRIMARY, are sometimes spoken of as ultimate ; nor is this last epithet improperly applied to them. But there seems, nevertheless, good reason for proposing the following distinction, viz. Primary truths may be always regarded as ultimate, but not all ultimate truths are primary. Primary truths are such as are necessarily implied in the mere fact of the existence of the mind and of its operations, particularly those of reasoning ; and being not only the necessary, but among the earliest products of the understanding, may also properly be called ultimate. But we also apply the epithet, ultimate, to those general truths, facts, or laws in our intellectual economy, which are ascertained by the examination and comparison of many particulars, and which are supposed to be unsusceptible of any further generalization.

For instance, when the rays of light reach the retina of the eye, and inscribe upon it the picture of some external object, there immediately follows that state of the mind, which we call sight or visual perception. When the mental exercises of whatever kind are frequently repeated, we

find the general result, that they acquire facility or strength. —Again, when we behold certain appearances in the external world, such as green fields, enriched with rivulets, and ornamented with flowers and trees, there immediately exists within us that pleasurable feeling, which is termed an emotion of beauty. —Supposing ourselves to have come in such cases as these, as Mr. Locke says, “to the length of our tether,” and to be incapable of making any further analysis, we call such truths, facts, or laws, *ultimate*. For the existence of these ultimate truths or laws we can give no other reason than this, that we are so formed, and that they are permanent and original characteristics of the mind. All the inquiries, which we are hereafter to make, will continually imply the existence of such ultimate or original laws, and it will be one great object to ascertain what are truly such. —But as the actual knowledge of these general facts is not an absolute prerequisite to the conduct of life, and in particular as it is not necessarily antecedent to the exercise of the reasoning faculty, we cannot call them *PRIMARY* in the same sense, in which that term has been applied to certain facts in our constitution already mentioned.

NOTE. The following are some of the works, which have treated more or less largely of the topics, embraced in this chapter;

Malebranche's Search after Truth, (*Recherche de la Vérité*), Bk. I.; Brucker's History of Philosophy, (*Historia critica philosophiæ*), ART. Pyrrhonic Sect; Claude Buffier's First Truths, (*Premières Vérités*, Pt. I., Oswald's Appeal to Common Sense; Beattie's Essay on Truth, Reid's Inquiry into the Human Mind on the Principles of Common Sense; Priestley's Examination of Reid, Beattie, and Oswald; Bishop Butler's Dissertation on Personal Identity, Stewart's Elements of the Philosophy of the Human Mind, Vol. II. CHAP. I.; Historical Dissertation, Pt. II, p. 182, 226, &c. —Of the above works, Buffier's First Truths, of which a translation into English was published at London in 1780, is particularly worthy of the student's attention. Mr. Stewart says of him, “I regard him as one of the most original as well as sound philosophers, of whom the eighteenth century has to boast.”

CHAPTER THIRD.

SOURCES OF MENTAL KNOWLEDGE.

§. 29. Of facts as the basis of mental philosophy and of the means of ascertaining them.

IN inquiring into our mental constitution, it seems requisite to proceed essentially in the same manner as in physical inquiries. In the examination of mental, as well as of physical nature, it will be found not only a great loss of time, but utterly unsafe, to indulge in mere speculation. It is necessary in both cases to set aside hypothesis and preconceived notions, and to ask, in the first instance, simply and sincerely for facts. Confessing our ignorance of the interior and secret agency, by means of which the mind operates, we simply inquire, What its operations are. We endeavour to possess, as far forth as possible, a full and perfect record of human thoughts, feelings, reasonings, prejudices ; of every thing, that relates to the mind. It is not till we have done this, that we can separate them, and arrange them into classes ; which we are enabled to do by means of a resemblance, which we find in some cases, and not in others.

But a question arises, How are we to make out this record ? What are the means to be used ?—This is certainly a subject, worthy of our attention, and it will be the object of this chapter briefly to indicate some of the sources of knowledge in respect to the mind, which are open to us. Even if the enumeration should be incomplete, it

will not be found wholly useless ; and indeed a complete statement on this subject could hardly be expected, since the human mind is found in some way or other to connect itself with almost every form of creation, with almost every event, and enterprise, and situation.

§. 30. *Of consciousness as a source of mental knowledge.*

Among the various means, which we employ in arriving at such facts as are destined to be the foundation of our conclusions in mental philosophy, a principal one is our personal internal experience ; in other words, consciousness.—In reliance on that great primary truth, which we have already considered, that there is an uniformity in nature, we conclude, that the grand features of the soul are the same in all men, as much so as the bodily features. The great fundamental truth just referred to, although it was seen to be antecedent to reasoning, was acknowledged to be founded on experience. And in the present case may it be said with confidence, the more we know of man and of material nature, the more clearly shall we see, that creation is made up of classes ; and wherever there are classes, there is of course a resemblance, a symmetry, a predominant similitude. Hence whoever has ascertained a truth in respect to his own mind, has reason to suppose he has detected a general principal of human nature. On this ground we are encouraged to look within, to make a study of our own intellect, to mark the workings of our own emotions and desires, in a word to form the record of our personal consciousness.

In doing this two cautions, which are equally important where other means of mental knowledge are to be resorted to, are to be observed ;

1. —Feelings, which are similar and are mingled together, must be carefully separated and distinguished. The necessity of this caution is grounded on the fact, that men are generally but little given to internal reflection, and are liable to mistakes from that cause ; and at the same time the mental states, which they are required to analyse, closely approach each other in appearance, or are much

complicated and intermingled. Hence the importance of the rule, which has been laid down, if they would learn the truth.

II, The material images, which are more or less involved in all the words which we use, are in no case applicable to the mind.—Those conceptions, which we are able to form of the machinery and action of the material world, will infallibly lead us astray, if we resort to them in our attempts to comprehend the soul. There must be a perfect abstraction from every thing of that sort ; from every thing visible, tangible, and bodily. There must be an entire rejection of that earthly import, which, on account of their material origin, is found to inhere in all words ; and we must employ them, both in our internal contemplations and in our communications to others, with that modification of meaning, which necessarily results from their being applied to a subject wholly different from matter.

With these two precautions, which will be found equally requisite in other methods of inquiry, a reference to our own Consciousness will become a great and satisfactory source of knowledge in respect to the mind.

§. 31. *Observation of others as a means of knowledge of the mind.*

A careful observation of the displays of intellect and of passion in those around us is another method of ascertaining such facts, as are requisite to be known in giving a sketch of man's mental history. It is desirable, that this source of information be combined with the experience of consciousness ; otherwise the latter may lead to misconceptions.

That knowledge of human nature, which is so often spoken of and lauded, and which implies not only a frequent, but an observing intercourse with others, is no other than a knowledge of mind. On the general principle, that effects always imply causes or antecedents, we may reason from the acts and conduct of men to the mind, which prompts them.—And accordingly, in order fully

to understand the subject we have before us, men are to be carefully marked in various situations, and in different periods of life.

In the first place, we are not only to observe the transactions of others around us; but are to contemplate the conduct of men in connection with their situation.—The perceptions and the remembrances, the efforts of reasoning and the passions, that slumbered or were active at one time, are called powerfully forth or are wholly suppressed under circumstances, that are different. The estimate of no man's mind can be taken with certainty, either from the strength or the weakness of a single occasion; but he must be seen, as his soul is operated upon by various influences both simple and complicated, both good and evil.

And furthermore, not only the different situations, in which men are placed from time to time, but the different periods of life are found to throw a greater or less degree of light on different parts of the history of the mind; abstraction and reasoning, the prejudices and passions are more fully brought out in manhood and old age; curiosity and invention, quickness of perception, and acuteness of sensibility are more prominent in youth.

It may be remarked here, that the particular source of information, which is chiefly relied on, imparts not unfrequently a peculiar character to the writings of different philosophers. Locke, for instance, mingled much with mankind; he was a man of action, business, and society; and studied others as much at least as himself. Hence his plain, direct, colloquial style; hence the multitude of facts, drawn from his experience and intercourse with others; and hence too the generous and ample spirit of his writings, which embrace all mankind, and which find a place somewhere for all human passions.* But Berkeley and Malbranche studied themselves more, and others less. They were deeply meditative, as far as they could be; but whenever we sever the mind from the great

* These remarks on Locke will be found illustrated and confirmed at length in Stewart's *Historical Dissertation*, Pt. II, §. 1.

brotherhood of humanity, we obtain a knowledge of it only in part, although that knowledge may be well founded, as far as it goes. It is evident, the human soul does not fully put forth its susceptibilities and passions, except in society with others. The views of these writers, therefore, as might be expected, are less broad, ennobling, and consistent.

§. 32. Of history, the drama, and literature in general as illustrating the mind.

In the third place, the various forms of Literature, particularly history, romance, and the drama, furnish valuable information in respect to the mind.—Not that the linements of our nature, as it is set forth in the pages of history and of poetry, or in other departments of literature, are different from those, that are of every day's occurrence. On the contrary, they are essentially the same. The same fierce passions and the same traits of gentleness, the same shrewd circumspection and the same ungovernable prejudices are exhibited in every situation, which the minutest annalist has described or the highest imagination conceived of ; existing alike beneath the rags of the mendicant and the purple of princes, in the humblest cottage and the dwelling-places of kings. In the extremes, as well as in all the intermediate ranks of society, there is the visible stamp of the great features of humanity ; the meanness and the nobleness, the gentleness and the rage, the sadness and the mirth, the wisdom and the folly.

But the difference is here ; the writers, to whom we now refer, the great names in literature, show us not a different nature, but the same nature in new and imposing lights ; they depict that common humanity, in which all are sharers, in untried and uncommon circumstances, and thus reveal secrets of the soul, which would otherwise have remained hidden.

And besides, the true historians and the great poets, those of the class of Tacitus and Shakespeare, have an understanding of these things, which others have not. They possess a more penetrating perception, and are able to dis-

criminate varieties of motive and character, where others of a duller insight would confound them together. They are able to do this, not only because nature has gifted them with an intellect of a higher grade, but because they have formed habits of observation; the human soul has been made their study; the chart, which they have had spread out before them; the book of their daily and nightly meditation. — This source of information in respect to the mind is distinctly acknowledged and pointed out by Bacon. He admits, that the poets are somewhat inclined to exaggerate their sketches; but kindles into enthusiasm at the remembrance of the perfect portraits of history, the Cato Major of Livy, the Nero of Tacitus, and the Ferdinand of Guicciardini.*

And let it not be deemed unsuitable, if under this head we refer to that remarkable book, which contains so much of history and true poetry, as well as ethics and religion; the book, from which the great minds, that have guided and enlightened our race, have drawn inspiration; and where all, that have sought knowledge, have found it, as in living wells. Who can give a truer picture of humanity, than the God, who made it? Who knows better its heights and its depths, its strength and its weakness, than He, who holds it in the hollow of his hand, and breathes into it the breath of life from hour to hour, and from moment to moment? Therefore, saying nothing of its unrivalled worth in other respects, we may expect to find in that volume,

* "Item apud poetas sparguntur ubique simulacra ingeniorum, hec fere cum excessu, et præter modum veritatis." — "At longe optima hujus tractatus suppellex et sylva peti debet ab historicis prudentioribus; neque tamen ab elogiis tantum, quæ sub obitum personæ alicujus illustris subnectere solent, sed multo magis ex corpore integro historiarum, quoties hujusmodi persona veluti scenam conceperat. Illa enim intertextæ imago, potior videtur descriptio, quam elogi censura; qualis habetur apud T. Livium, Africani et Catonis Majoris, apud Tacitum, Neronis," &c. — "Isti enim scriptores, harum personarum, quas sibi depingendas delegerunt, effigies quasi perpetuo intuentes, nunquam fere rerum gestarum ab ista mentionem faciunt, quin et aliquid insuper de natura ipsorum inspergant; — Vid. *Instauratio Magna*, Lib. VII. Cap. III.

which He has condescended to give us, the lineaments of our nature, particularly of its sentient and moral part, drawn without mistake.

§. 33. *Passages illustrative of the preceding section.*

A few instances will help to illustrate what has been said in the preceding section ; and will perhaps encourage the student to observe more carefully in his reading those traits of human nature, which skilful authors will hardly fail to introduce.—Mr. Stewart has remarked, that the incoherent ravings of an insane person tend to disturb and unsettle the mental action of sane persons, who are much in their company. In confirmation of his opinion he refers to the tragedy of King Lear, where the incoherent expressions of Edgar, although his madness was feigned and not real, evidently quickened the disordering of the old King's wits. The same writer in his Essay on the Beautiful lays it down as a principle, that the poet can arrange the succession of the various emotions which he wishes to excite in such a manner, as to make the transition agreeable from one to another, and sometimes to delight his reader by skilful contrasts. He refers to Homer's description of Achilles' shield, where sieges and battles are happily contrasted with the vintage, harvests, and pastoral scenes. He directs his reader also to a beauty of this kind in the great English dramatist.—After the awful scene, he remarks, in which Macbeth relates to his wife the particulars in his interview with the weird sisters ; and where the design is conceived of accomplishing their predictions that very night by the murder of the king ; how grateful is the sweet and tranquil picture presented to the fancy, in the dialogue between the king and Banquo, before the castle gate.

“ This castle hath a pleasant site ; the air
Nimbly and swiftly recommends itself
Unto our general sense.——

———This guest of summer,
The temple-haunting martlet, does approve
By his lov'd mansionry, that heaven's breath
Smells wooingly here. No jutting frieze,

Beltrice, nor coigne of vantage, but this bird
Hath made his pendant bed, and procreant cradle.
Where they most breed and haunt, I have observed
The air is delicate."

But it would be no small task to point out all the instances, where writers on the Philosophy of the mind have referred to Shakespeare. They appear to feel uncommonly sure of their ground, whenever they find themselves supported by that great master, not merely of the passions, but of the whole soul of man.

History likewise, in the hands of suitable writers, is every where enlivened by original sketches of the mind; indeed without them it is universally allowed to lose a great share of its interest and value. Let the reference to a single instance suffice. In Count Segur's History of Napoleon's Russian Expedition, is the following passage, which suggests reflections on the nature of the soul, and the power of association. Speaking of the wounded soldiers in the great battle of Borodino, "One of them, he says, the most mutilated, (one arm and his trunk being all, that remained of him.) appeared so animated, so full of hope, and even of gaiety, that an attempt was made to save him. In bearing him along, it was remarked, that he complained of suffering in the limbs, which he no longer possessed. This is a common case with mutilated persons, and seems to afford additional evidence, that the soul remains entire, and that feeling belongs to it alone, and not to the body, which can no more feel than it can think."

No one department of literature is excluded from offering its contributions to the science of the mind. Even the Essays of Addison and Montaigne, which appear to be designed as much to amuse as to instruct, often contain valuable suggestions. Saying nothing of Addison's more formal remarks on the Pleasures of the Imagination, take the following important thought, which seems to be thrown out accidentally in Number six hundred of the Spectator.—"Although we divide the soul into several powers and faculties, there is no such division in the soul itself, since it is the whole soul, that remembers, under-

stands, wills, or imagines. Our manner of considering the memory, understanding, will, imagination, and the like faculties, is for the better enabling us to express ourselves in such abstracted subjects of speculation, not that there is any such division in the soul itself." These brief illustrations will perhaps suffice for our present purpose. It is not necessary to anticipate the occasions, when others will be introduced. Our present object is merely to indicate the general sources of information, and the manner, in which they may be made available.

§. 34. *Languages a source of knowledge in respect to the mind.*

LANGUAGE is another help, which we are permitted to make use of in these inquiries.—The consideration of particular terms, of classes of terms, and of the general structure of languages throws much light on the mental operations. The structure of all dialects most clearly evinces, that certain feelings of relation are deeply and originally founded in human nature, and are inseparable from it, such as the relation of agent and action, which are only other names for cause and effect, and the relation of subject and attribute.

"Language, (says Dr. Reid,) is the express image and picture of human thoughts; and from the picture we may draw some certain conclusions concerning the original. We find in all languages the same parts of speech; we find nouns, substantive and adjective; verbs active and passive, in their various tenses, numbers, and moods. Some rules of syntax are the same in all languages.—Now what is common in all languages, indicates an uniformity of opinion in those things, upon which that structure is grounded.

The distinction between substances and the qualities belonging to them; between thought and the being that thinks; between thought and the objects of thought, is to be found in the structure of all languages; and, therefore, systems of philosophy, which abolish those distinctions, wage war with the common sense of mankind."*

* Reid's Intellectual Powers of Man, Essay vi.

§. 35. *Other sources of mental knowledge.*

There are various other sources of information, by means of which we may be aided in making out a full and distinct delineation of the human mind.

I,—Some parts of the writings of medical men may observe this purpose. The history of the mind cannot be entirely separated from that of the body. The mind exists in the present life in connection with the body; impressions on the bodily part are occasions of many new mental states; a disorder of the physical system is often attended with a mental weakness or even derangement. Hence, as auxiliary to our knowledge of the mind, it is necessary to be, in some measure, acquainted with the physiology of the human system, especially the brain, nerves, and organs of sense. The writers, who are to be consulted with this view, furnish valuable information on other points. In particular, on the intricate subject of mental alienation in all its forms, medical writers are generally more full, and in many respects more satisfactory than others. Not unfrequently some peculiar instance of bodily infirmity, or some successful operation for its relief has thrown much light on the mind. Malebranche and Locke had both conjectured, that the distance, form, and size of bodies are not direct objects of visual perception, but that this knowledge is acquired by degrees, and could not be acquired at all by means of sight alone. The point was one of importance and difficulty; but the successful operation of the anatomist Cheselden on a young man, who had been blind with a cataract, was the means of permanently putting it at rest.

II,—Correct memoirs of the mental history of the deaf and dumb are of much use. These unfortunate persons struggle with great and multiplied difficulties; one source of knowledge is entirely shut up, and they are thereby not only deprived of the harmony of sweet sounds, sent forth from all nature, but of the power and pleasures of human speech, that great instrument of mental communication. Still the soul within them is seen to struggle for-

ward under the pressure of these adversities ; putting distinctly forth the thoughts, the feelings, and passions, that are common to humanity. Such instances illustrate the connection of the mind with the organs of sense ; the vast activity and energy of the soul under circumstances the most unpropitious ; and particularly what feelings are original in the mind, in distinction from those, which are the result of education.

III,—Valuable results may be obtained from the record of peculiar cases ; those of persons, who have been doomed, either by nature or by accident, to experience some strikingly marked and uncommon deprivation. There is a case, answering to this description, to be found in the writings of Condillac, which is made by that acute metaphysician the ground of some interesting remarks. It is the account, which he has given in his *Origin of Human Knowledge*, of a boy caught at ten years of age, who from childhood had lived in the forests of Lithuania, altogether shut out from human society. Here was human nature in a form as new and instructive, as it was melancholy.

To this head also may properly be referred the cases of such unfortunate persons as have been not only deaf and dumb, but blind. One might suppose, that such multiplied deprivation would wholly prostrate the mind ; but observation has proved it otherwise. In that unfortunate boy without sight, speech, or hearing, of whom Dugald Stewart has given such an interesting sketch, we see in some respects a more marked display of the native energy of the human intellect, than we do in the discoveries of the most exalted minds, whose operations have been unimpeded by any similar evils. The life of such an one, especially when given by so skilful an observer, is worthy of particular attention.

MENTAL PHILOSOPHY.

PART FIRST.

IMMATERIALITY

AND

GENERAL LAWS OF THE MIND.

CHAPTER FIRST.

IMMATERIALITY OF THE MIND.

§. 36. *Of certain frivolous inquiries concerning the nature of the mind.*

HAVING briefly disposed of those topics, which may properly be deemed auxiliary and introductory to the main inquiry, we are now ready to enter more directly and decisively into the consideration of our mental being. All men may well be supposed desirous of learning, as far forth as possible, the true and exact nature and state of the soul ; and without question it is altogether proper to attempt to satisfy this desire. But it becomes necessary, in entering into this somewhat difficult subject, to intimate at the outset the importance of guarding against an undue tendency to speculation, and of excluding such topics as evidently do not admit of any satisfactory results. It was the fault of the Schoolmen to indulge in such unfathomable discussions ; and the unfavourable decision, which subsequent ages have pronounced on their laborious efforts, should remain a warning to others. It is perhaps necessary to mention some of the speculations, which are here referred to, in order that each one may judge for himself of the probable utility of entering into them. Among other things they are understood to have attempted, with much ostentation and with no small effort of inquiry, to ascertain the mode of the soul's existence ; the distinction between its existence and its essence ; whether its essence

might subsist, when it had no actual existence ; and what are the qualities of the soul, considered as a non-entity.

It requires no deep reflection to conjecture the folly of these inquiries, and of others of not much greater reasonableness and importance ; and if it were otherwise, the point must now be considered as sufficiently settled by the literary history of the Grecian sects, and particularly of the Scholastic ages. There are, however, other points, connected with the nature of the soul, which we might be culpable in declining to consider ; and in particular that of its immateriality. This is a subject, which for various reasons cannot wisely be dispensed with. We ought not to exalt our nature, at the expense of the truth ; but nothing less than the truth at least should ever induce us to assign to it a low and degrading estimate. If it be true, as Addison with his usual felicity has remarked, that one of the best springs of generous and worthy actions is the having generous and worthy thoughts of ourselves, then surely, whether the soul be formed of matter or not, is a great inquiry.

§. 37. *Origin and application of the terms, material and immaterial.*

If we cannot assert directly and positively what the mind is, we may at least approximate to a more intimate acquaintance with it, by attempting to evince, and illustrate its immateriality. But this term itself, and its opposite are first to be inquired into.

The words MATERIAL AND IMMATERIAL are relative ; being founded on the observation of the presence, or of the absence of certain qualities.

Why do we call a piece of wood, or of iron material ? It is, because we notice in them certain qualities, such as extension, divisibility, impenetrability, and colour. And in whatever other bodies we observe the presence of these qualities, we there apply the term. The term IMMATERIAL, therefore, by the established use of the language and its own nature, it being in its etymology the opposite of

the other, can be applied only in those cases, where these qualities are not found.

Hence we assert the mind to be immaterial, because in all our knowledge of it we have noticed an utter absence of those qualities, which are acknowledged to be the ground of the application of the opposite epithet. The soul undoubtedly has its qualities or properties; but not those, which have been spoken of. Whatever we have been conscious of and have observed within us, our thought, our feeling, remembrance, and passion are evidently and utterly diverse from what is understood to be included under the term materiality.

Such is the origin of these two terms, and the ground of the distinction between them. And thus explained, they can hardly fail to be understood. We may, therefore, now proceed to state the evidence of the actual existence of that distinction between mind and matter, which is obviously implied in every application of them. In other words, we are to attempt to show, that the soul is not matter, and that thought and feeling are not the result of material organization.

§. 38. *Difference between mind and matter shown from language.*

Is it a fact, that the being or existence, called the soul, is distinct and different from that existence, which we call MATTER?—We have already remarked on the propriety of sometimes referring to the structure of languages, in order to illustrate our mental nature; and in respect to the question now before us, we are warranted in saying, that Language in general is one proof of such a distinction. In the last section, we saw the use of certain terms in our own language, and the grounds of it. All other languages, as well as our own, have names and epithets, distinctly expressive of the two existences in question. This circumstance, when we consider, that the dialects of men are only their thoughts and feelings embodied as it were, may be regarded as a decisive proof, that the great body of

mankind believe in both, and of course believe in a well founded distinction between them.

That such is the belief of men generally, as clearly evinced by the structure of languages and in various other ways, will not probably be denied. It is a matter too evident to permit us to anticipate a denial. When, therefore, we take into view that there are grounds of belief fixed deeply and originally in our constitution, and that, in their general operation, they must be expected to lead to truth, and not to error, we are unable to harbour the supposition, that men are deceived and led astray in this opinion; that they so generally and almost universally believe in the existence of what in point of fact does not exist.

§. 39. *Their different nature evinced by their respective properties.*

Again, the distinction between mind and matter is shown by the difference in the qualities and properties, which men agree in ascribing to them respectively.—The properties of matter are extension, hardness, figure, solidity, and the like. The properties of mind are thought, feeling, volition, reasoning, the passions. The phenomena, exhibited by matter and mind, are not only different in their own nature, but are addressed to different parts of our constitution. We obtain a knowledge of material properties, so far as it is direct and immediate, by means of the senses; but all our direct knowledge of the nature of the mental phenomena is acquired by consciousness.

Every one knows, that the phenomena in question are not identical. There is no sameness or similitude, for instance, in what we express by the terms hardness and desire, solidity and hatred, imagination and extension. Holding it to be unphilosophical to ascribe attributes so different to the same subject, we conclude the subjects of them are not the same. And accordingly we call the subjects of one class of phenomena Mind, and that of the other Matter.—But there is one of the properties of matter, which,

considered as applicable to mind, is worthy of a more particular examination.

§. 40. *The material quality of divisibility not existing in the mind.*

That there is an essential and permanent distinction between mind and matter, seems to follow in particular from an examination of that material quality, expressed by the word, divisibility. All matter is divisible. However small we may imagine any particle to be, we must still suppose it to have a top and bottom, a right and left side ; and therefore, to admit of being divided into different parts. All extension, which is acknowledged to be one of the primary qualities of matter, implies divisibility.

Now if divisibility and extension be not ascribed to the mind, all, that is contended for, is virtually conceded. But if, on the other hand, either or both of these qualities, for they reciprocally involve each other, belong to the mind, then the following difficulty arises.—If the mind itself be susceptible of division, as all matter is, then still more its thoughts and feelings may be thus divided. But this is contrary to all our consciousness ; and consciousness is the only means or instrument, which we can directly employ in obtaining a knowledge of the mind. No man is ever conscious of a half, or a quarter, or a third of a hope, joy, sorrow, remembrance, or volition. Indeed if the soul were separable into parts, one part might be filled with joy, and another with sorrow at the same time ; one part might be occupied with a mathematical demonstration, and another in framing a poem or a romance.

We may possess, at different times, different mental states both in kind and degree ; but, however our feelings, when occurring at successive and different periods, may differ from each other in these respects, our consciousness never fails to ascribe to them individually an unity or oneness. And the unity, which we ascribe to the attributes or acts of the mind, still more we ascribe to the mind

itself. It is the whole soul, and not a moiety or fraction of it, which is the subject of its various feelings.

§. 41. *Opinions of Buffier on the soul's indivisibility.*

The sentiments of Buffier on this topic are so well expressed, and come from a writer of so much wisdom, that they seem to be suitably inserted in this place.—“I cannot, he says, without a degree of folly imagine, that my being or what I call *me*, can be divided; for, were it possible that this *me* could be divided in two, it would then be *me* and not *me* at the same time: it would be so, as it is supposed; and would not be so, since each of the two parties must then become independent of the other: one might think, and the other not; that is to say, I might think and not think at the same time; which destroys every idea of *me* and of *myself*.

“Besides, this *me*, and all other beings similar to this *me*, in whom unity is necessarily conceived, and where I cannot suppose any division without destroying their very essence, and every idea I can entertain of them, is what I call an *immaterial* or *spiritual* being; so that, by destroying its unity, you destroy its entire essence, and every idea of its existence. Divide a thought, a soul, or a mind in two, and you have no longer either thought, soul, or mind? This indivisibility is, moreover, evident to me by the interior sense of what I am; and, by the efficacy of the same sentiment, I likewise learn that what I call *me* is not properly what I call *my body*, as this body may be divided both from me, and in itself; whereas, with regard to *me*, I cannot be divided from myself.”

§. 42. *The soul's immateriality indicated by the feeling of identity.*

There is another somewhat striking consideration, which may aid in evincing the immateriality of the soul. It is well known that the materials, of which the human body is composed, are constantly changing. The whole bodily system repeatedly undergoes, in the course of the ordinary term of man's life, a complete renovation, and

yet we possess, during the whole of this period and amid these utter changes of the bodily part, a consciousness of the permanency, as well as of the unity of the mind. "This fact, remarks Mr. Stewart, is surely not a little favourable to the supposition of mind being a principle essentially distinct from matter, and capable of existing when its connection with the body is dissolved."

Truly if the soul, like the body, were made up of particles of matter, and the particles were, in this case as in the other, always changing, we should be continually revolving, as an old writer expresses it, and sliding away from ourselves, and should soon forget what we once were. The new soul, that entered into the same place, would not necessarily enter into the possession of the feelings, consciousness, and knowledge of that, which had gone. And hence we rightly infer, from an identity in these respects, the identity or continued existence of the subject, to which such feelings, consciousness, and knowledge belong. And as there is not a like identity or continued existence of the material part, we may infer again, that the soul is distinct from matter.

§. 43. *The material doctrine makes man an automaton or machine.*

The doctrine, that thought is the result of material organization, and that the soul is not distinct from the body, is liable also to this no small objection ; that it makes the soul truly and literally a machine. If what we term mind be in truth matter, it is of course under the same influences. But matter, in all its movements and combinations, is known to be subject to a strict and inflexible direction, the origin of which is exterior to itself. The material universe is truly an automaton, experiencing through all time the same series of motions, in obedience to some high and authoritative intelligence ; and is so entirely subject to fixed laws, that we can express in mathematical formulas not only the state of large bodies, but of a drop of water or of a ray of light ; estimating minutely extension and quantity, force, velocity, and resistance.

It is not thus with the human mind. That the mind has its laws is true ; but it knows what those laws are ; whereas matter does not. This makes a great difference. Matter yields a blind and unconscious obedience ; but the mind is able to exercise a foresight ; to place itself in new situations ; to subject itself to new influences, and thus control in a measure its own laws. In a word, mind is free ; we have the best evidence of it, that of our consciousness. Matter is a slave ; we learn that from all our observation of it. It does not turn to the right or left ; it does not do this or that, as it chooses ; but the subject of an overpowering allotment, it is borne onward to the appointed mark by an inflexible destiny.—If these views be correct, we see here a new reason for not confounding and identifying these two existences.

§. 44. *No exact correspondence between the mental and bodily state.*

The train of thought in the last section naturally leads us to remark further, that there is an absence of that precise correspondence between the mental and bodily state, which would evidently follow from the admission of materialism. Those, who make thought and feeling the result of material organization, commonly locate that organization in the brain. It is there the great mental exercises, in the phraseology of materialists, are secreted, or are developed, or are brought out in some other mysterious way, by means of a purely physical combination and action. Hence, such is the fixed and unalterable nature of matter and its results, if the brain be destroyed, the soul must be destroyed also ; if the brain be injured, the soul is proportionally injured ; if the material action be disturbed, there must be an exactly corresponding disturbance of the mental action. The state of the mind, on a fair interpretation of this doctrine, is not less dependent on that of the body, than the complicated motions of the planetary system are on the law of gravitation. But this view, whether we assign the residence of the soul to the brain or to any other part of the bodily system, does not appear to be

accordant with fact. It is not only far from being approved and borne out, but it is directly contradicted by well attested experience in a multitude of cases.

§. 45. *Evidence of this want of exact correspondence.*

We are desirous not to be misapprehended here. We readily grant, that the mind, in our present state of existence, has a connection with the physical system, and particularly with the brain. It is, moreover, obviously a natural consequence of this, that when the body is injured, the mental power and action are in some degree affected ; and this we find to be agreeable to the facts, that come within our observation. But it is to be particularly noticed, that the results are just such as might be expected from a mere connection of being ; and are evidently not such as might be anticipated from an identity of being.

In the latter case the material part could never be affected, whether for good or evil, without a result precisely corresponding in the mind. But in point of fact, this is not the case. The body is not unfrequently injured, when the mind is not so ; and on the other hand the soul sometimes appears to be almost entirely prostrated, when the body is in a sound and active state. How many persons have been mutilated in battle in every possible way, short of an utter destruction of animal life, and yet have discovered at such times a more than common greatness of mental power ! How often, when the body is not only partially weakened, but is resolving, at the hour of death, into its original elements, and possesses not a single capability entire, the mind, remaining in undiminished strength, puts forth the energy and beauty of past days !

We are now speaking of injuries to our corporeal part and of bodily debility in general, but if we look to the brain in particular, that supposed strong tower and fortress of the materialists, we shall find ourselves fully warranted in an extension of these views there. According to their system the soul, (that is, what the materialists call the soul or what they substitute for it,) possesses

not merely a bodily habitation, but a fixed and local habitation in some selected part of the body ; and they are understood to be agreed upon the brain, as the particular place of its residence. But the objection to their views, which in its general form has already been made, exists here in full strength. If that organization, which they hold to result in thought and feeling, have its abode in the brain, it must be diffused through the whole of that organ, or limited to some particular part. But it appears from an extensive collection of well authenticated facts, that every part of the brain has been injured, and almost every part absolutely removed, but without permanently affecting the intellectual and sentient powers. "Every part of that structure, says Dr. Ferriar in a learned Memoir, the statements of which have not, as far as we know, been controverted, has been deeply injured or totally destroyed, without impeding or changing any part of the process of thought." He remarks again, after bringing forward a multitude of undoubted facts, as follows ; " On reviewing the whole of this evidence, I am disposed to conclude, that as no part of the brain appears essentially necessary to the existence of the intellectual faculties, and as the whole of its visible structure has been materially changed, without affecting the exercise of those faculties, something more than the discernable organization must be requisite to produce the phenomena of thinking."*

§. 46. *Comparative state of the mind and body in dreaming.*

The views of the two preceding sections receive some confirmation from the comparative state of the mind and body in dreaming.—In sound sleep the senses sink into a state of utter and unconscious sluggishness ; the inlet to every thing external, as far as we can judge, is shut up ; the muscles become powerless ; and every thing in the body has the appearance of death. It is true, the soul appears

* See the Argument against the doctrine of Materialism, addressed to Thomas Cooper, Esq. by Dr. John Ferriar, and published in the 4th volume of Memoirs of the Manchester Philosophical Society.

for the most part to be fallen to a like state of imbecility ; but this is not the case in its dreams, which are known to take up no small portion of the hours of sleep. At such times it does not appear to stand in need of the same repose with the body ; otherwise it would seek, and possess it. Nor is its action to be considered an inefficient and sluggish one ; which might afford ground for the conjecture, that the half awakened body had partially liberated and revived the fettered and extinguished mind. On the contrary, when the powers of the body are utterly suspended, the soul is often exceedingly on the alert ; it rapidly passes from subject to subject, attended sometimes with sad, and sometimes with raised and joyful affections.

But this is not all ; often in the hours of sleep the intellect exhibits an increased invention, a quickened and more exalted energy in all its powers. Many writers have remarked, that the conclusions of abstruse investigations have been suggested to them at such times. Not a few would conclude themselves persons of genius, if they could pronounce the arguments and the harangues in the awakened soberness of the morning, which they had framed in the visions of the night. So frequent and well known is this quickened mental action, that a certain writer has ventured to assert, with as much truth at least as is commonly found in antitheses, that the ligation of sense is the liberty of reason.*

X §. 47. *The great works of genius an evidence of immateriality.*

But there is one more train of reflection, which may help to throw light on this subject. It is not enough, if

* This view of the soul has been taken by various writers. Addison, who entertained ennobling sentiments of our nature, has dwelt upon it at some length. He often touches on other topics, connected with the exercises of the soul ; but he does it with such exceeding ease and grace ; we enter so readily into the train of his reflections ; that we are apt to allow him less originality and depth, than he merits.—See Numbers of the Spectator, 111, 487, 554, 593, &c.

we would fully understand its nature, to contemplate the soul merely in seasons of bodily prostration and sickness, in suffering, and in the hour of death. However capable the mind may be of discovering the greatness of its powers under these pressures and disadvantages, it would be too much to expect at such times a continued effort and elevation. And yet it is only a continuance of elevated effort, which can secure the highest results. When the senses are unclosed, when the powers of the physical system are unchained throughout, and are healthy and active, the human mind may be expected with fuller confidence to erect those vast creations, which we cannot but regard as an evidence of its purely spiritual nature. Results so ennobling are not congenial with what we know of matter. It is almost as revolting to our feelings as our understanding, to refer those works, which have stood the test of ages, to no higher origin, than what Mr. Hume calls a little agitation of the brain, and others would call, with but little difference of meaning, a secretion or developement either of the brain, or of organization in some other material part.

Among the numerous efforts, which are now referred to, it is difficult to make a selection. Many of them will occur of themselves. Standing forth, amid the successions of time, a monumental mark, they have as yet never failed to attract the gaze and the wonder of men.—What framed the demonstrations of Euclid? The mind. Where was the authorship of the political institutions of Solon and Lycurgus, and of that still greater effort of political wisdom, the American Constitution? In the mind. Was it the body or the soul of Homer, the intellect or the brain of the blind old bard, that infused the breath of immortality into the Iliad and Odyssey? What gave birth to the vast and perfect combinations of the Jerusalem Delivered, the Fairy Queen, and the Paradise Lost? Where shall we look for the origin of the Philippics of the Ancients, or in later times of the speeches of Fox, and of the orations of Bossuet?

In these cases, and in all others, where human genius

has triumphed in like manner, there is one short answer; man has an intelligent soul; man possesses an active and creative mind; in the words of Holy Writ, there is in man a spirit, and the inspiration of the Almighty hath given understanding.—Such we suppose to be the answer of mankind, of common sense, and of human nature, as well as of the Bible. It is an answer, which matter would never give, and which is itself a proof of the spirituality and nobleness it asserts. Giving ourselves up to the influence of the vast conceptions, embodied in the works and institutions of human genius, we find it is as difficult to attribute them to a purely material cause, as it is to adopt the theory of the atheist, and ascribe the beautiful and complicated machinery of the universe to a fortuitous concurrence of atoms.

§. 48. *Of the immortality of the soul.*

With the subject of the immaterial nature of the soul, that of its immortality is closely connected. We are, therefore, naturally led to present a few suggestions on this last topic, although it will not be necessary to enter into it with much minuteness.—We suppose the soul to be immortal, or in other words to have its existence continued beyond the present life, because it is immaterial. Those, who hold, that thought and feeling are in some way the direct result of material organization, admit, that the soul, or rather what they speak of as the soul, dies with the body; and certainly they would be inconsistent with themselves, if they did not do so. Their theory by their own admission imperiously requires, that man's noble and capacious intellect shall dissolve and scatter itself in the ashes of the grave; lost and annihilated, until it shall be created anew, if that should ever happen. But the opposite system, which we have endeavoured to show to be the true one, holds out a different view of the destiny of our spiritual nature. It is true, the immortal existence of the soul does not follow with absolute certainty from the mere fact of its immateriality; but it is at least rendered in some degree probable. Certainly we have no direct

evidence of the discontinuance of the soul's existence, as we have of that of the body. What takes place at death is not a removal of the soul's action from our notice, but not, as far as we know, a cessation and utter extinction of it. The supposition, therefore, is a reasonable one, that the soul will continue to exist, merely because it exists at present, inasmuch as its immaterial nature does not require the suspension of its existence at death, and as we have at least no direct evidence of such an event.—Death, in the language of Mr. Stewart, only lifts up the veil, which conceals from our eyes the invisible world. It annihilates the material universe to our senses, and prepares our minds for some new and unknown state of being.

In the second place, considering man, as he is, to be a moral and accountable being, we feel as if his destiny were not fulfilled in the present life. It would unsettle all our hopes, trust, and happiness, if we did not believe in a great moral plan, the completion of which is as certain as the permanency of the omniscient Being, from whom it originated. But its completion in the present state is by no means evident: vice and virtue are here conflicting; and the eye of moral and religious faith looks anxiously forward to some future allotment, where the one shall meet its retributive, and the other be crowned with its reward. Our present situation, considered in a moral point of view, strongly suggests, and even demands for the soul an hereafter.

§ 41. Remarks of Addison on the soul's immortality.

Furthermore there is something in the expanding and progressive nature of the soul, which strongly favours the supposition of its future and even unlimited duration. This important thought we find dwelt upon in the writings of Addison in the following terms.—“How can it enter into the thoughts of man, that the soul, which is capable of such immense perfection, and of receiving new improvements to all eternity, shall fall away into nothing almost as soon as it is created? Are such abilities made for no purpose? A brute arrives at a point of perfection

that he can never pass: in a few years he has all the endowments he is capable of; and were he to live ten thousand more, would be the same thing he is at present. Were a human soul thus at a stand in her accomplishments, were her faculties to be full blown, and incapable of farther enlargements, I could imagine it might fall away insensibly, and drop at once into a state of annihilation. But can we believe a thinking being, that is in a perpetual progress of improvements, and travelling on from perfection to perfection, after having just looked abroad into the works of its Creator, and made a few discoveries of his infinite goodness, wisdom, and power, must perish at her first setting out, and in the very beginning of her inquiries?" (Spectator, No. 111.)

But after all we must rest as to this point chiefly on Revelation. It is possible by various arguments to render the immortality of the soul in a high degree probable, but we do not profess to prove it beyond question; for there is nothing necessarily and in its own nature eternal but God himself. The permanency of created things does not depend necessarily on their being material or immaterial, but on the will of their Creator. If every star shines, and every flower blooms by the will of God; it is not the less true, that every soul lives by the same will. We might, therefore, remain in some degree of doubt on the subject of the soul's immortality, did not the Scriptures convert our hopes and expectations into certainty. We are told, that life and immortality, (which is only a Hebraistic mode of expression for immortality of life,) are brought to light in the Gospel.

It requires but a slight examination of those works, which the Creator has so abundantly spread around us, in order to satisfy ourselves, that every thing in nature has its rules. The motion, expansion, increase, diminution, and position of objects, and whatever else we express when we speak of the changes they undergo, are controlled by determinate principles. There does not appear to be any exception, whatever objects we may turn our inquiries to. We see the truth of what has been said, even when we direct our attention to those parts of creation, which make the least approach to life, symmetry, and beauty. There is a regularity discoverable in the composition and formation of rocks, and in their position; and the same unchangeable rule, that holds the immense sun in his orbit, prescribes and sustains the condition of the minute particles of air and water. In such other natural objects, as approach more nearly to symmetry and life, we witness increased indications of order; for instance in the growth of plants and trees; in the separation of the moisture, that is taken from the earth, and its distribution to the trunk and rind, to the leaves, flowers, and branches. But nothing more than this subjection to some fixed rule, this regular order, is meant, when we use the term Law, and when we speak in particular of the laws of nature.

Nor is this state of things otherwise than might be anticipated. That there should be an arrangement and orderly condition even of material things seems inevitably to result from the mere fact of the existence of a Creator, to whom they owe their origin. That higher and effective existence, which we denominate God, implies, in its very elements, a pervading inspection, a sleepless and inscrutable superintendence, which looks upwards and downward, within and around, wherever there is aught of time or space, of visible or invisible, of material or immaterial.

§. 51. *Objection from the apparent disorders in nature.*

It is sometimes objected to this view of the connection

and order of nature, that many things happen by chance ; and it must undoubtedly be admitted, that such, in many cases, is the appearance. Nevertheless this appearance is owing rather to the feebleness of our discerning powers, than to any thing actually existing in the objects, towards which these powers are directed. In other words, it is to be ascribed rather to the imperfections of the mind, than to the irregularities of nature.

The correctness of this solution of the difficulty in question may be inferred from the fact, that events, both natural and moral, which appear accidental and matters of chance to one, are perceived by another, who has more information, to be subjected to the orderly influence of laws. The man of science, merely in consequence of his different mental position, often takes a very different view of the same object from the man, who is without scientific knowledge ; and what, in this respect, is true of individuals, compared with each other, may equally well be said of the men of any particular age, compared with the men of a succeeding age. An ignorant generation will see mystery and danger, where an enlightened one will find neither. In the present age of the world an eclipse of the heavenly bodies is noticed without dismay, because it is regarded as one of the settled and permanent adjustments of nature ; but Tacitus has informed us, what surprise, what doubt, and horror such an event could inspire in the days of Tiberius. A comet appeared in 1456 ; it was a period of great ignorance ; every man looked on his neighbour with fear and astonishment, as if this strange sign in the heavens foreboded some great convulsion, some wreck of matter, or some subversion of empires.—But it so happened, that, in a subsequent age, this fearful visitant was carefully watched and noted by the English astronomer Halley. By means of his observations he not only proved, that it revolved round the sun, but was able to show its identity with the comets of 1531, 1607, and 1682 ; and of course that the period of its revolution was about seventy five years. He accordingly predicted, that it would return in 1758 or the beginning of 1759, which proved true.—Since

that time, the fears, that were connected with the appearance of these luminaries, no longer exist ; men look upon them with different eyes ; they regard them as permanent parts in the great arrangement and constitution of created things ; not as the causes of terror and grief, but rather as the indications and proofs of infinite wisdom and power.

And then extending this train of thought yet further, if we mount upward from the intelligent being, which we denominate man, to those higher intelligences, which we know to exist with only an imperfect knowledge of the mode of their existence, how many of the secrets of nature may we suppose cleared up to them, which yet remain mysterious to us ! The obscurity, that rests on creation, diminishes more and more, as it is exposed to the investigation of minds of a higher and higher grade, until we arrive at the mind of Omniscience, that embraces it with a glance, and every where beholds order, and truth, and harmony.

§. 52. *Remarks of Montesquieu on laws.*

These views do not profess to be novel ; it is of more importance that they be found true ; and it is some indication, that they are so, that similar sentiments, and expressed with the characteristic terseness and vivacity of that distinguished author, are found in the writings of Montesquieu. The passage is a fitting introduction to a Work, which with much reason is thought to have exerted an influence on Political, hardly inferior to that of Locke's Essay on Mental philosophy.

“ Laws, in their most general signification, are the necessary relations arising from the nature of things. In this sense all beings have their laws, the Deity his laws, the material world its laws, the intelligences superior to man their laws, the beasts their laws, man his laws.

They who assert, that a *blind fatality produced the various effects we behold in this world*, talk very absurdly ; for can any thing be more unreasonable than to pretend that a blind fatality could be productive of intelligent Beings ?

[illegible]

some sense exterior, inasmuch as they have special relation to the duties of mankind, and their external conduct in general. But when, at a subsequent period, men turned their attention from the outward to the inward, they were not long in clearly discovering the marks of an interior uniformity and order; they detected in every mental state a complete history, its beginning and progress, its relations and end; and thus gradually became assured of a set of subjective laws, giving guidance and support to the mind itself.—And it is these, which we are now more particularly to attend to.

§. 54. *Mental laws may be divided into two classes.*

The term Law, when applied to our mental nature, is merely a designation or statement of those circumstances, according to which the general action of the mind, and the more definite exercise of its particular susceptibilities are regulated.—If we are right in giving this account of mental laws, they naturally, although they may sometimes approximate and even run into each other, resolve themselves into two classes.

The first class are those, included in the first clause of the above definition, viz. such as restrict and limit the general action of the mind.—We find, when we resolve our complex states of mind into their parts, that we at last arrive at certain elementary thoughts, beyond which we cannot proceed; the nature of the mind itself will not permit it to go further. All those ultimate truths also, which we come upon at almost every step in the mind's history, and which we are equally unable to explain and to analyze further, are to be reckoned among the permanently restrictive laws of our spiritual being. The same may be said of whatever can be ascertained to be necessary and exclusive conditions of the mind's action in the whole progress of its inquiries, such as the well known and indispensable conditions of time and space.

The second class are those, which regulate in particular the separate susceptibilities of the mind; such, for example, as sustain and limit the associating principle, belief,

and reasoning.—The first class relate to the mind in general, the second to its parts ; the first teach us, how far we can go, the second, under what circumstances we can reach the goal, which it is permitted to aim at ; but the nature of both will more fully appear in our subsequent inquiries.

§. 55. *Distinction between the susceptibilities and the laws of the mind.*

It may conduce to the better understanding of this general subject and of its numerous applications, to point out here particularly the distinction between laws and susceptibilities. Although they have sometimes been confounded together, it has been owing to mere inadvertence, since a distinction so clearly exists between them. This difference may be illustrated in the case of mental association.

The fact, that one state of mind is succeeded by another, that one idea calls up another, indicates a mental power or susceptibility ; while the circumstances, whether more or less general, under which the exercise of this susceptibility is regulated, are more commonly and properly termed laws. The former mode of expression indicates that inherent energy, sometimes known as the power or faculty of association, which pervades and characterizes our mental nature ; the latter indicates the particular limits, within which this form of the soul's power is restrained and governed.

Again, what we term belief is undoubtedly a distinct state of the mind, and of course implies the mental power or susceptibility of believing. But it is a matter sufficiently well known, that this power is not exerted at all times, and under all circumstances ; in other words, one state of things is followed by belief, while another is not. Now LAWS OF BELIEF, in distinction from the power or susceptibility, are only general statements of those circumstances or perhaps more properly of those occasions, in which belief is found necessarily, and, as it were, from our very constitution to exist.

CHAPTER THIRD.

LAWS THAT LIMIT THE MIND.

§. 56. *Evidence of the general fact of the mind's being limited.*

We shall first consider the mind in those respects, in which its general action appears to be naturally and permanently limited. That there are such natural limitations and obstructions in the progress of knowledge, it is presumed, will not be doubted. Every one must be conscious of this, in some degree for himself; feeling, as we do, from time to time the struggles within us, repressed and driven back by the embankments of our nature, like the imprisoned bird, that beats the bars of its cage, and seeks flight in vain. As might be expected also, all languages bear witness to this restricted intellectual ability; for we never fail to find in them abundance of such terms as these, UNKNOWABLE, INCONCEIVABLE, INCOMPREHENSIBLE, IGNORANT, FOOLISH, and the like. Now we may be assured, that men would not have invented terms of this description, and in such numbers, unless they had been satisfied of the existence of a sound and ample cause for them. But it is not necessary to debate at length a point, on which there can hardly be supposed to be a difference of opinion.

Believing, therefore, although there may be no end to the mind's journey in the practicable and allotted direction, that the pathways of knowledge are hedged up by impassible barriers in various places on the right hand and

left, it will be the object of the present chapter to ascertain some of these limitations. And it may be added here, that this is the precise topic, referred to in a former section, which Mr. Locke thought of so much practical importance, and which first led him to direct his powerful intellect to the systematic study of human nature. We enter, therefore, into this discussion with the twofold encouragement of its own obvious utility, and of that philosopher's weighty authority.

§. 57. *Objection to this inquiry from the incompleteness of the mind's history.*

Nevertheless we are not ignorant of the objection, which is sometimes made even by those, who would be disposed to admit the general correctness of what has been said, to entering at all into this subject : viz. that it is too early a period in the mind's history to determine what are its boundaries, and what are not. The mind, it is said, with truth, is essentially active and inquisitive ; its own nature forbids its remaining stationary, but compels it, as it were, to make constant advances even on the present theatre of being ; and hence it is contended, we are utterly unable to foresee what depths it may fathom, what heights it may ascend, and what limits it may pass in future times. That there is some weight in this objection, cannot be denied ; but when rightly considered, it is valid only in part. It may justly require us to be cautious in our investigations, but should not compel us to give them up altogether.

We do not find, that objections of this sort deterred Locke from undertaking this inquiry. How affecting it is, to hear a man of such vast capacity, compared with the intellects of other men, acknowledging with the utmost simplicity and sincerity his mental weakness ! “ He, that knows any thing, knows this in the first place, that he need not seek long for instances of his ignorance. The meanest and most obvious things, that come in our way have dark sides, that the quickest sight cannot penetrate into. The clearest and most enlarged understandings ;

thinking men find themselves puzzled and at a loss in every particle of matter."

The distinguished metaphysician, who expresses himself in this humble way, ever sought the truth with the greatest earnestness ; and what he noticed without, combined with what he felt within, sufficiently satisfied him, that some obstacles in the way of the mind's progress, although many might in the course of time be overcome, would remain insurmountable. Nor has the progress of knowledge since his time shown that conclusion to be a mistaken one. On the contrary, the history of mental efforts in all past ages, from the beginning to the present period, have tended to confirm his opinion of the mind's restricted power, and have shown, in some few instances at least, how far we may advance, and where our exertions are brought to a stand.*

§. 58. *The mind limited as to its knowledge of the essence or interior nature of things.*

We may sometimes find ourselves unable to describe the laws, which restrict the general action and progress of the mind, with so much precision as we can those, which have relation to its particular susceptibilities ; but there

* The whole fourth book of Mr Locke's Essay relates to grounds of belief and the limits of our capacities. There is some reason to believe also, from the account which he gives of the way, in which he was led into these inquiries, that this book was the first written by him. On this subject, Mr. Stewart, in his Historical Dissertation, (Pr. II, §. 1,) has the following interesting remarks.—“ On comparing the *Essay on Human Understanding* with the foregoing account of its origin and progress, it is curious to observe, that it is the fourth and last book alone, which bears directly on the author's principal object. In this book, it is further remarkable, that there are few, if any, references to the preceding parts of the Essay ; in-somuch that it might have been published separately, without being less intelligible than it is. Hence, it seems not unreasonable to conjecture, that it was the *first* part of the work in the order of composition, and that it contains those leading and fundamental thoughts which offered themselves to the author's mind, when he first began to reflect on the friendly conversation, which gave rise

are good grounds for saying in general terms, that the mind is in some way permanently limited as to its knowledge of the essence of objects. The word **ESSENCE** is understood to express that interior, but imperceptible constitution of things, which is the foundation of the various properties and qualities that are perceived; in other words, that particular constitution, which all existences must be supposed to have in themselves, independently of any thing and every thing external. But whatever this may be, either in the spiritual or material world, no man knows it, no man understands it.

A person may look on the outside of a watch or clock, and the visible part, the face and hands, may indicate to him what was intended, viz. the hour and minute of the day. But, although he may clearly apprehend this, he may be altogether ignorant of the internal and invisible mechanism, on which the external and visible result depends. And so in the material world we know the outward and sensible, while we are altogether shut out from that unsearchable efficacy, on which the external agency depends; and in the immaterial world, we know the properties and qualities, while we are ignorant of that

to his philosophical researches. The inquiries in the first and second books, which are of a much more abstract, as well as scholastic, nature, than the sequel of the work, probably opened gradually on the author's mind, in proportion as he studied his subject with a closer and more continued attention. They relate chiefly to the origin and to the technical classification of our ideas, frequently branching out into *collateral*, and sometimes into *digressive*, discussions, without much regard to method or connection. The third book, (by far the most important of the whole,) where the nature, the use, and the abuse of language are so clearly and happily illustrated, seems, from Locke's own account, to have been a sort of *after-thought*; and the two *excellent chapters on the Association of Ideas and on Enthusiasm* (the former of which has contributed, as much as any thing else in Locke's writings, to the subsequent progress of Metaphysical Philosophy) were printed, for the *first time*, in the *fourth edition* of the Essay."

subjective entity, without which qualities and properties could not exist.

§. 59. *Our knowledge of the nature of mind itself limited.*

Some particulars will help to illustrate and establish what has been remarked.—In the first place, with the nature of the mind itself, which is the instrument and foundation of all other knowledge, men possess but an imperfect and limited acquaintance ; nor have we reason to suppose that it will ever be essentially otherwise than it is at present. That the mind exists is a truth ; this simple fact is a matter of undoubted knowledge ; but the mode or nature of its existence, that interior vitality, which constitutes the true mental being in distinction not only from material being, but also from its own attributes and qualities, is what men have never been able fully to comprehend, and probably never will.

In proof of the correctness of this sentiment, reference might safely be made again to consciousness, to each one's inward and personally deep conviction of ignorance on this subject. Not that consciousness makes a positive declaration of this ignorance, but it very clearly implies it, by its acknowledged inability to make us acquainted with any thing further than the mere qualities and operations of the mind. The Schoolmen also might here be brought to our recollection, who long attempted, with all the force of their acute and disputatious intellects, to break down this barrier of knowledge, but without success. And without impropriety, we might refer likewise to the remarks, which are so commonly, and every where made, that the mind is not a direct subject of contemplation, that what is called its essence can never be found out, and that we know nothing of it in itself. Remarks of this kind are not made so frequently without grounds for them ; they are founded in the general experience, and of course are valuable, considered as an expression of that experience.

This view, it is important to be kept in recollection, is not exclusive ; we assert our ignorance of the mind in

some respects, but not in all. Our knowledge embraces a certain extent, but is unable to go beyond.

§. 60. *Remarks on the extent of this limitation.*

To prevent misapprehension, therefore, it seems proper to point out some of the particulars, in which actual knowledge in respect to the mind, is supposed to exist.

(1) Men universally experience certain internal feelings and operations, such as perceiving, belief, volition, imagining, and comparing ; and so far as the mere existence of these mental states is concerned, they have knowledge. They know the fact of their taking place, and know them also, as we shall have occasion to see, in their relations. (2) These feelings give occasion for the additional and altogether distinct notion of mind. It seems to be a well settled sentiment, that, without such mental states as have been referred to, the latter notion could never exist ; that, without the actual experience of intelligence and emotion, men could never form the idea of an intelligent and sentient being. And so far, therefore, as the mere occasions of forming the idea of mind, and the mere existence of the idea which they give rise to, are concerned, we may suppose ourselves to possess knowledge.—(3) Subsequently, but almost immediately, we experience another original state of mind, that of the relative suggestion of appropriation or possession. That is to say, we feel the ideas, which were the occasions of the additional notion of mind, to belong to this latter idea ; the relative suggestion, the origin of which is inseparable from our constitution, indissolubly binds the two together as subject and attribute. And so far also we have knowledge.—We may go further in our inquiries into the mind, and say with certainty what it is not ; for instance that it is not material, since we have never been able to observe and detect in it the qualities and operations of matter. Nor is it necessary to assert, that these are all the particulars, in which we may obtain direct and positive knowledge.

But after all, when we return to the main question of what the mind is in itself, of what the mind is, consider-

ed as separate from its qualities and operations, and any mere attendant circumstances, it is then we cannot avoid feeling our utter inability to penetrate the pale of its interior nature. We contemplate it in the outer temple, but the veil excludes us from the shrine. Again and again we return to the examination of this high and mysterious thought, but it still remains simple, inseparable, and indefinable; and however long and intently we may revolve it for the purpose of breaking up its simplicity, and knowing more of its hidden and invisible essence, it will ever set our efforts at defiance.

§. 60. *Our knowledge of matter in certain respects limited.*

If we turn from mind to matter, to the knowledge of which some may suppose we possess a more obvious and easy access, we shall find our efforts circumscribed by like limits. We are able to advance to a certain extent in our inquiries, but there we find ourselves compelled to stop.

When, for example, a piece of wood, or any other of those material bodies, by which we are surrounded, is presented to any one for his examination, there are some things in this material substance, which may be known, and others, which cannot. Its colour, its hardness or softness, its extension are subjects, upon which he can inform himself, can reason, can arrive at knowledge. He opens his eye; an impression is made on the organ of vision, and he has the idea of colour. By means of the application of his hand to the wood, he learns the penetrability or impenetrability, the softness or hardness of the mass, which he holds. By moving his hand from one point to another in the mass, he is informed of the continuity or extension of its parts. But when he pushes his inquiries beneath the surface of this body, when he attempts to become acquainted not only with its qualities, but with that supposed something, in which those qualities are often imagined to inhere, and, in a word, expends his efforts, in obedience to this unprofitable determination, in learning what matter is, independently of its properties, he then

stumbles on a boundary, which cannot be passed, and seeks for knowledge where by their very constitution men are not permitted to know.

§. 61. *Our ignorance of the reciprocal connection of mind and matter.*

If we find both mind and matter incomprehensible to a certain extent, we might naturally anticipate no less mystery in their connection with each other, in their reciprocal action and influence. The fact of such a connection, and the extent, to which it exists, have already been briefly remarked on. When the mind is strongly affected, the body is for the most part affected also ; and on the other hand, when the body is either vigorous with health or depressed with sickness, the mind generally exhibits a sympathetic vigour or depression. If this be not uniformly and always the case, it certainly is in a great number of instances.

Of the truth of the general fact, with those exceptions and modifications made in the last chapter, there can be no doubt ; but of the mode of the fact, of the manner of this connection, it is not within the powers of the human mind to conceive ; for it is to be observed, it is not the operation of matter on matter, nor of mind on mind, which might be supposed to be something coming more readily within the range of our comprehension ; but the operation on each other of existences utterly distinct ; not possessing, as far as can be judged, a single attribute in common.

§. 62. *Illustrated in the case of voluntary action.*

What has now been said, it will be noticed, relates to the general connection of mind and matter, the general reciprocation of influence ; but this striking law of our nature shows itself constantly, and in particular instances.

We might refer, in particular, to all cases of voluntary exertion. Putting forth that act of the mind, which we call volition, we move a hand, a finger, a foot ; mind puts

matter in motion; the material is controlled by the immaterial; but common as it is, it is incomprehensible.

We might refer again, for a like instance of the connection we are considering and of our ignorance of the way in which it is effected, to every act of the Supreme Being. In the highest and truest sense God is MIND, a truly spiritual existence. The hands and feet and eyes, which are ascribed to Him in Scripture, are expressions, accommodated to man's limited views. He created all things. A desire, a mere volition gave birth to light and air, to earth and water, to the world and all it contains. We admit the fact, but can give no explanation; we live and move in the midst of the great result, but we know not how it was achieved.

The instances, which have now been mentioned, may be thought by some to be too diverse from each other in degree, if not in kind, to illustrate the same principle; but we are not singular in bringing them together for this purpose. In point of mystery, Mr. Locke seems to place the dependence of bodily action on volition on the same footing with the wonder and inconceivableness of Creation itself. His expressions are these.—“My right hand writes, while my left hand is still. What causes rest in one, and motion in the other? Nothing but my will, a thought of my mind; my thought only changing, my right hand rests, and the left hand moves. This is matter of fact, which cannot be denied. Explain this and make it intelligible, and then the next step will be to understand Creation.”

§. 83. *Further illustrations of our ignorance in respect to this connection.*

But this is not all. The influence we are speaking of, even in its more particular and definite exhibitions, is not all on one side. If it be true, that mind can govern matter, that the immaterial can shape that which is material to its own ways and purposes, it is not less so, that matter possesses a degree of control over mind; the visible and tangible is capable of exerting a power on that, which can

be approached neither by sight nor touch. And if the exertion of influence in the former case is mysterious, it is equally so in the latter. It is impossible for any man to tell on the one hand, why a new state of mind should in any case cause a new state of matter ; or on the other, why a new state or disposition of matter should cause a new state of mind, as we find to be the fact in whatever we have to do with the material world. Two obvious instances will suffice to suggest others.

I,—The rays of light are reflected from the various objects around us, and if they are only permitted to reach the retina of the eye, which is the end of their journey, how many pleasing appearances the mind becomes possessed of, and which it would not have had, were it not for the presence of a few material and very minute particles ! There is at once spread out and displayed, as it were, in the soul all the diversities of the most delightful landscapes, the undulations of hill and valley, expanses and partial glimpses of water, reaches of forest of various form and hue, interspersed with cottages and cultivated places. Who could have imagined, that the soul of man would be so suddenly roused up to embrace such complicated and pleasing views at the mere presence and bidding of a few rays of light, the smallest and apparently most inefficient things in nature ! Still more, who can point to the cause, or explain the method of it ? Who can tell the mode of intercourse between those rays and the mind, except only the Being, who frames and knows all things ?

II,—When the air is put in motion by musical instruments of whatever kind, how the whole soul is affected and filled with new sensations ! How it languishes also with grief, or rejoices with hope, or glows with patriotic emotion ! The action of these undulations of air not only fills the soul with present sensation and feeling, but opens up new trains of thought and emotion by association, and combines the thought and feeling of the past with the present.

“ How soft the music of those village bells,

“ Falling at intervals upon the ear.

“ With easy force, it opens all the cells

“ Where memory slept. Wherever I have heard
 “ A kindred melody, the scene recurs,
 “ And with it all its pleasures and its pains.”

§. 64. *Of space as a boundary of intellectual efforts.*

Furthermore, we find the action of our mental powers, when occupied in particular in gaining a knowledge of material things, to be restricted and limited by **SPACE**.

What space is, it is not necessary to undertake to say, because no person is without as clear a knowledge of it, as can possibly be given by any form of words. But one thing seems to be certain, little as we know of what goes under that name, that it bounds and shuts up all that part of our knowledge at least, which relates to matter. As far as our direct and positive experience is concerned, every one is prepared to admit, that his acquaintance with material objects is circumscribed in this manner. But we may go farther ; we may make the appeal with confidence to the general experience, and aver on the ground of that experience, that it is impossible for men to form even a conception of the existence of matter independently of space.

In some respects also, space limits our conceptions of **MIND**. As long as we consider mind immaterial, we do not of course regard it as occupying space in the material sense ; nor in any sense, of which language, which discovers the materiality of its origin in its whole structure, can convey any adequate notion. But however this may be, when we inquire for the mere fact, it is undoubtedly out of our power to conceive of either matter or mind existing out of space.

It has already been remarked, that the Supreme Being is an immaterial or spiritual existence, and it may be objected here, that this view tends to circumscribe and restrict the divine nature. But this objection is founded on a mistake. It is true, our conceptions are bounded by space ; the human mind in its highest flights cannot extend itself beyond its limits ; but we are not prepared to say, that the actual existence of God is limited by our con-

ceptions. On the contrary we may suppose him to exist and act in regions far beyond the furthest excursions of all inferior intelligences, in hidden apartments and unexplored tracts of the universe, where the widest and most untiring range of thought in men and even in angels has failed to penetrate.—On this subject all language fails ; all imagination comes short ; in the words of Holy Writ applied to another case, *Eye hath not seen, nor ear heard, nor hath it entered into the heart of man to conceive.*

§. 65. *Of the relation of time to our mental conceptions.*

TIME also is another of those limits, which seem to have been imposed from the beginning on men's faculties.

As time is different from space, so the relations, which existences of whatever kind have to it, are different. But without at present entering into the subject either of its nature or relations, we may lay down the general proposition, that we know nothing, and can conceive of nothing, where time is not. What we express by the word Eternity is only another name for time never completed ; and consequently clearly intimates the limited compass of our understandings.

It is possible, the same objection may be made here as in respect to space, that this doctrine tends in some way to limit the natural existence of the Supreme Being. But this is a misapprehension. It does not limit the Divine nature, but only asserts, when applied to the Supreme Being, the limitation of our conceptions of his nature.

Mr. Locke once made the unadvised and hasty assertion, that external bodies operate upon us by impulse, and nothing else. Afterwards, he said with the candour characteristic of truly great minds, although he could conceive of no other way of their operation, yet it was too bold a presumption to limit God's power in this point by his own narrow conceptions. So in the present case, we may truly say, we cannot conceive of God's existing abstractly from time or out of time, but it would be too bold a presumption in us to limit the Divine nature by our own narrow and bounded views. In point of fact

both time and space, which exceed the comprehension of the human mind, and consequently place a limit on all its efforts, dwindle into the very smallest compass, in comparison with the unlimited expansion and ubiquity of the Supreme Being. With him there is, properly speaking, no such thing as time; it is lost and extinguished in the unfathomable recesses of an ever present eternity; expressions, which, although as good perhaps as we can select, evidently intimate our ignorance of what we attempt to convey. The Scriptures expressly and repeatedly take this view. "With the Lord, says an Apostle, one day is as a thousand years, and a thousand years as one day."

Although it may be humiliating to our pride, to find that our minds are so bounded and shut up, to learn that the utmost compass of our own knowledge and existence forms but a mere point amid the vast, unmeasured, and unmeasurable circumference of God's knowledge and existence, still we cannot wisely and consistently reject the great truth itself. The ablest and wisest men have received it, and in some instances it has had a practical effect of a very beneficial kind, inspiring an increased degree of humility and caution, and a feeling of forbearance and candour.—True, the poet Gray represents the mighty mind of Milton as having scaled the limits we have been contemplating, the *flaming bounds*, as he calls them.

But this is only the license and fiction of a poet. If that should ever happen, which he has so sublimely imagined, and men should ever break through the walls of space and time, which God has erected between himself and inferior intelligences, we might well anticipate the result, which the same glowing fancy has indicated;

"They saw, but blasted with excess of light,
"Closed their eyes in endless night

§. 66. *Mystery of human freedom as consistent with the Divine prescience.*

Whether we look within or without, to the world of matter or of mind, instances in illustration of our subject will by no means be wanting. If there be a degree of

mystery even in the smallest particle of matter, sufficient to baffle our inquiries, then we may reasonably expect to be frequently put back and baffled in the very intricate subject of the mind and its relations. Accordingly we find various inquiries in the philosophy of the mind, which have hitherto eluded all efforts at a satisfactory solution of them ; and many things render it not improbable, that they ever will.—One of these difficult topics, stated in a few words, is the consistency of man's freedom with the Divine prescience ; but as it is a topic, which has been much debated, and on which an opinion should not be lightly hazarded, it seems proper to remark, that it is brought in here, merely for the purpose of illustration.

Various considerations and trains of argument are thought to have established these two distinct points, viz. the foreknowledge of God and the entire freedom of human actions. In the view of very many persons, both propositions are susceptible of being clearly and satisfactorily established. But another question immediately presents itself, which, by the admission of all parties, is not so easily disposed of. The consistency of the Divine prescience, which is supposed necessarily to imply an antecedent and perfect superintendence as its basis, with man's unshackled freedom, has hitherto been found a knot, a puzzle, which the greatest minds have found themselves unable to resolve.

What shall we say here ? Have we arrived in this instance at a limit, which we cannot pass ? Are we called upon to believe without being able to explain ? Are we required distinctly to admit our inability to solve every thing ?—If such be our apprehension of the state of this question, then surely it becomes us in this and in all similar cases, to submit cheerfully to what we have grounds for conceiving to be an ultimate restriction, an inevitable ignorance.

§. 67. *Limits of the mind indicated by the terms, infinity, eternity, &c.*

Again, the limited nature of the human mind will be

found to discover itself in the use of such terms as these, eternity, infinity, universe, omniscience, incomprehensibility, &c.—We never can fully understand what is meant to be expressed by the word OMNISCIENCE, so long as we know not all things ourselves. We bear it on our tongues, it is true, and apply it to the Supreme Being ; but every one knows and feels, that it falls vastly short of the mark.

We speak of the UNIVERSE, which means the whole ; but it is impossible for us to form an idea of a whole, applicable to all existences, which shall perfectly and necessarily exclude any existence beyond its boundaries. No man's mind can limit space even in conception, however true it may be, that all our conceptions are limited by that ; and wherever there is space, there either is, or may be existence. Therefore, when we speak of the universe, we hardly know what we speak of ; it is something great, mysterious, and in part at least utterly undefinable, which the mind struggles after, but without the power to grasp it.—The terms, infinity, eternity, and the like imply, that the ideas, intended to be expressed by them are imperfect ; that there is something in them beyond the mind's reach ; and of course that the efforts of the mind, when made in the direction indicated by them, are bounded and kept back by some fixed law.

It may be further added, that, in all truly simple ideas, we have reached a boundary, which we cannot pass. We cannot resolve them into others ; we cannot detect in them any subordinate parts ; we cannot define them ; we must leave them as they are.

§. 68. *Of restraints resulting from ultimate facts of the mind.*

We encounter restraints also ; in other words, we have gone as far as the powers of our minds will permit, whenever we have ascertained any ultimate facts or truths of our mental constitution. It is possible we may sometimes suppose ourselves to have arrived at ultimate principles, when we have not ; but on the supposition that we have truly reached them, it is certain we can go no further.

that of the multitude of instances, that will present themselves, a few will suffice to illustrate this.

I.—The nature of *reception*, by means of which we become acquainted with external objects, is such, there can be no knowledge from this source, unless the external object be present in the first instance. However great we suppose its energies to be, the mind is here evidently restricted. It can have no sensations of sight without the presence of a visible object, no sensations of touch without the presence of a tangible object, no sensations of hearing without something which is audible.

II.—The mind finds itself restricted likewise in those subsequent conceptions of objects, which have once been perceived. The existence of such conceptions depends on the exercise of association; and the action of association is known to be governed by fixed and inflexible laws, the operation of which we cannot suspend and alter, except only indirectly and imperfectly.

III.—We cannot call up thoughts, as we shall hereafter have opportunity to notice, by mere direct volition; and hence in all cases of reasoning and imagination, we find ourselves subject to the restraint, occasioned by this inability.—It is the same in various other instances.

§ 20. *The sentient part, as well as the intellect has limits.*

There are boundaries also, although we may not be able to indicate them with equal clearness, in the sentient part of man. These restrictions undoubtedly differ from those which have been considered, in not being impassable. But it is certain, that this can never take place, that these boundaries can never be transgressed, without the most unhappy consequences.—The passions, for instance, have their due limits, and if it be possible, as we know it to be so from too frequent experience, for them to be exceeded, still it is always attended with an interruption of the general adjustment of the mind. If a man be exceedingly angry, the susceptibilities of the memory and of the judgment, and other powers will be disturbed; if

he be animated with very strong fears or joys, the result will be the same.

And what is a striking evidence, that the whole soul of man, the sentient part as well as the intellect, has its definite arrangement and limits, is, that, whenever the passions of whatever kind are indulged to a very great extent, they not only cause a temporary interruption of the just action of the mind, but may produce a permanent and total disorganization. Let them put forth their full power for any length of time, and the mind is torn, as it were, from its basis ; there is felt and witnessed a wreck of the spiritual fabric, a prostration of its strength, a distortion of its symmetry, a blotting out of its magnificence.

§. 70. *Mental limitations implied in man's inferiority to his Creator.*

It is not necessary at present to pursue this general topic further, than merely to add the remark, that, while we shall find much in our mental structure to enhance our admiration, there will be something also to check the feeling of pride. What has been said in the course of this Chapter is sufficient perhaps to lead us to anticipate this. Much there will be undoubtedly, as we go on in our inquiries, to make us think well and highly of the mind and to encourage mental efforts, but from time to time there will be found something, which it is hardly less important to be acquainted with, to qualify this favourable estimation, and to restrain an overweening confidence.

And let us here pause and ask, Can it be otherwise ? Ought it to be otherwise, when we consider man's origin, the fewness of his days, his foundation in the dust ? True, man is great and noble, compared with much, that lives, and flourishes, and perishes around him ; but then how his greatness is diminished, when compared with much, that lives and flourishes above him ! If there were with him, as with his Creator, neither beginning of years, nor beginning of knowledge, the case would be different. But since he began to know, as it were, but yesterday, and has only

such means of knowledge as have been given him, why should he be ashamed of his ignorance, or complain that every effort is not successful, that every wish is not gratified !

It is the necessary result of the relation he sustains to his Creator, that his mental powers are circumscribed. The Author of the mind could not have made it without limits, without its allotted boundaries, unless he had disrobed himself of the attribute of omniscience, and conferred it upon the creature ; unless he had made man the source and centre of all foresight and all knowledge, and been willing to assign to himself a subordinate and inferiour station.

Let us not then do violence to our moral, as well as our intellectual being by striving after that, which is forbidden ; by forgetting the weakness of our nature ; by rejecting the salutary consideration, that the excellence of man is but imperfection, and the wisdom of man but folly in comparison with God.

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CHAPTER FOURTH.

LAWS OF BELIEF. (I) CONSCIOUSNESS.

§. 71. *Nature and degrees of belief.*

HAVING considered laws, so far as is necessary at present, as limiting and controlling the action of the mind in general, we now come to that second class, which was spoken of, viz. those, which have relation to the particular and subordinate susceptibilities of the mind, and of these, we shall first examine the LAWS OF BELIEF.

As to the nature of what is called Belief, when we use the term to express the result in distinction from the susceptibility, not much can perhaps be said more than this, that it is a simple idea, a simple intellectual state, with which we become acquainted, in the phraseology of Mr. Locke, from REFLECTION, or more precisely by means of that internal intimation, called Consciousness. Not being a complex, but an uncompounded feeling, it does not admit of definition ; and yet all are supposed to have a knowledge both of its existence, and of its general nature, as far at least as a knowledge of our elementary notions is attainable in any case.

As it is a simple idea, BELIEF is always the same in kind ; but it admits of different degrees. We determine these differences of strength in the feeling by means of that same internal consciousness, which assures us of the existence of the mere feeling itself. In other words, we

are conscious of, or feel our belief to be sometimes weaker, and at other times stronger.

To these different degrees of this mental state, we give different names ; a low degree is termed **PRESUMPTION** ; a higher degree, **PROBABILITY** ; and the highest possible belief is termed **CERTAINTY**.——When the mind is in that state, denominated **Certainty**, we are generally said to **know** the thing, to which this very strong belief relates. But when we use knowledge and certainty as synonymous, which is no doubt frequently done, we should remember, that the highest possible belief is sometimes caused by imperfect or false evidence, and of course that we may sometimes find ourselves indulging the very strongest belief of what does not actually exist.

§. 72. *Of the objects of belief.*

It is obvious, that the exercise of belief implies an object or something believed, not less so, than that the putting forth of memory implies something remembered. Any thing, which can be framed into a proposition, and is susceptible of the application of any of the forms of evidence whatever, may be an object of belief either in a higher or less degree. And hence there are so many things in nature, in the conduct of men, and in the pursuits and relations of life, coming within the limits of this statement, we shall decline attempting an enumeration of them, and merely say with Dr. Reid, that the objects of belief are all things, whatever they may be, which are believed.*

§. 73. *Of the laws of belief.*

If it be clear, that any part of our mental nature has its laws, (and after what has been said, no doubt can be thought to exist on that point,) it cannot fail to occur, that the power of belief is as likely as any thing else in the mind to be restricted and sustained in this manner. If it were otherwise, if belief could arise without reference to any fixed principles, men would shortly find themselves

* Reid's Intellectual Powers of Man, Essay II.

in a singular and unheard of condition ; the foundations of all foresight and precaution, of all the common intercourse of life, of all society and government would be effectually undermined. A moment's consideration of what a state we should be in, in the defect of all fixed principles, operating as the origin and guidance of our opinions, must satisfy any one, that belief has its laws.

Accordingly our Creator has kindly attended to this important part of our mental economy, and has so ordered things within and without us, that there is no want of circumstances, which sustain a determinate and effective relation to this susceptibility.

It is a great and undoubted principle, that all things in the universe, coming within the range and cognizance of the soul, whether material or immaterial, visible or invisible, have an influence on it ; in other words, that there is an universal law of belief. But this great principle, in consequence of the objects, which are capable of affecting the mind, being presented to it in different ways or under different forms, may be resolved into subordinate ones, and may accordingly be contemplated in parts or sections. It is on this ground, that we are able to use the plural, and to speak of laws of belief, the law of Consciousness, the law of the Senses, the law of Testimony, and the like.

§. 74. *Consciousness a law of belief.*

Before entering into the examination of the separate grounds of belief just referred to, it is proper to observe, it is not deemed necessary to make a distinct account of those original intimations, which seem to flow out necessarily from the mere fact of the mind's existence and active nature, such as the notion of mind, identity, self or person, &c. Highly important as these elementary thoughts are, and controlling, as they constantly do, our belief ; still it is to be remembered, they are comparatively few in number, and have already been in part attended to under the head of Primary Truths.

Of those elementary laws, therefore, which are appli-

and to himself, the first we shall consider is that of **Consciousness**. We find no doubts expressed, that what we call by that name is the occasion of giving rise to, and of regulating our opinions and convictions within certain limits.

That portion of belief and knowledge, which has particular relation to the mental states, to our internal and spiritual qualities and operations, is generally referred by writers to the exercise of this law, as the ground of its origin. Nothing is more frequent than such language as this, that we possess by this means a knowledge of this or that internal feeling, a knowledge of this or that mental quality, an acquaintance with the different emotions, and passions, with volition, reasoning and the like.

However suitable such language is, and however well founded the doctrine implied in it, it may still be important to inquire somewhat at length, What is to be understood by the particular term **Consciousness**? Unless we do this, as the word is often employed without much precision, we shall from time to time be aware of an indistinctness and confusion, arising from this neglect.

Q. *What is to be understood by Consciousness.*

Ans. *Before we can come to a satisfactory conclusion as to what is to be understood by the term we are looking in to, two remarks are to be made.*

FIRST, the idea of mind, of that permanent something, which thinks and feels in distinction from mere thought and feeling, is antecedent to consciousness. In the chapter on Primary Truths, which professedly treated of such elementary thoughts and views as are the early and necessary results of our internal constitution, it was seen, that, immediately on the taking place of the first mental experience, the notion or idea of mind arises; that is to say, the idea of that distinct sentient existence, which is always implied, when we speak of ourselves. At any rate, whether this idea be immediately consequent on the first mental exercise or not, it arises at so early a period as to lay the foundation of that mental state we are considering. It

will be found an useless attempt to conceive of any such thing as consciousness, without implying in it the antecedent notion of mind or self-existence.

SECOND ; another observation to be attended to, is, that consciousness is not a susceptibility or power of the mind. It seems impossible to consider it in that light, without abandoning every consistent notion of it at once. Nor will writers of authority be found in general so to regard it, if we take suitable pains to collect and compare the various expressions they employ.—It may indeed be admitted, that what is termed consciousness, though not a susceptibility itself, implies the exercise of one, that of judgment or relative suggestion ; but there is no less evidence of its being as truly different from that particular power, the exercise of which is acknowledged to be implied in it, as cause is from effect.

§. 76. *Consciousness properly a complex state of the mind.*

But if consciousness be not a power or susceptibility, (terms, which in their application to the mind are employed as expressing essentially the same thing,) what are we then to understand by it ?—And the answer is, that it may be described, with the nearest approach to a correct notion of it, as merely a complex state of mind, embracing at least the three following distinct notions ; viz. (1) the idea of self or of personal existence, expressed in English by the words SELF, MYSELF, and the personal pronoun I ; (2) some quality or state or operation of the mind, whatever it may be ; and (3) a relative perception of possession, appropriation, or belonging to. A person says, for instance, I AM CONSCIOUS OF GRATITUDE. In this instance, which may be taken as representative of many others, the idea of SELF or of personal existence is expressed by the pronoun I ; there is a different mental feeling, and expressed by its appropriate term, that of the affection of GRATITUDE ; the phrase, CONSCIOUS OF, expresses the feeling of relation, which instantaneously and necessarily recognizes the affection of gratitude as the attribute or property of the subject of the proposition.—

Consciousness, therefore, involving a relative idea, can never exist without at least two others ; and any proposition, expressive of consciousness, is necessarily expressive of a complex, and not of a simple state of mind.

It may be objected here, that this makes consciousness a mental law, and a mental state at the same time. True ; but what is a law of belief ? Only the existence of those general circumstances, in which belief necessarily arises ; and of course there is no incompatibility in its so being. And in point of fact it will be found, that every case of consciousness, whether it embrace a greater or less number of simple ideas, furnishes occasion for belief, and is infallibly accompanied by it.

§. 77. *Of the proper objects or subjects of consciousness.*

As there are some things, to which consciousness, as the term is usually employed, relates, and others, to which it does not, it is proper to consider it in this respect in particular.—As to those thoughts, which may have arisen, or those emotions, which may have agitated us in times past, we cannot with propriety be said to be conscious of them at the present moment ; although we may be conscious of that present state of mind, which we term the recollection of them ; that is, to say, of other feelings of the same kind, and having relation to a particular antecedent occasion.

Again, consciousness has no direct connection with such objects, whether material or immaterial, as exist at the present time, but are external to the mind, or in other words have an existence independent of it. It has relation only to things in the mind, as we sometimes say ; or more definitely to states of the mind.

§. 78. *The objects of consciousness wholly internal and mental.*

As the remark at the close of the last section has relation both to material and immaterial existences, it seems proper to consider it distinctly in these two respects.

I,—We are not, strictly speaking, conscious of any material existence whatever ; of the earth we tread, of the food that nourishes us, of the clothes that protect, or of any thing else of the like nature, with which we are conversant. In accordance, however, with the view which has been given of this subject, we can rightly assert our consciousness of the effects they produce within us, of the sensations of taste, of heat and cold, of resistance and extension, of hardness and softness, and the like. Our consciousness does not, in strictness of speech, hold a direct relation to the existence of the material world in any form, whether particular or general ; that is to say, we are not directly conscious of such existence, but only of that state of mind, which we term a firm belief or knowledge of it.

II,—This view holds also in respect to immaterial things, even the mind itself, as we have had occasion already to see. We are not directly conscious, using the term in the manner which has been explained, of the existence even of our own mind, but merely of its qualities and operations, and of that firm belief or knowledge of its existence, necessarily attendant on those operations. “ According to the common doctrine, (says Mr. Stewart, *Philos. Essays*, I, ch. I,) of our best philosophers, it is by the evidence of consciousness we are assured that we ourselves exist. The proposition, however, when thus stated, is not accurately true ; for our own existence is not a direct or immediate object of consciousness, in the strict and logical meaning of that term. We are conscious of sensation, thought, desire, volition ; but we are not conscious of the existence of mind itself ; nor would it be possible for us to arrive at the knowledge of it (supposing us to be created in the full possession of all the intellectual capacities that belong to human nature) if no impression were ever to be made on our external senses. The moment that, in consequence of such an impression, a sensation is excited, we learn two facts at once ;—the existence of the sensation, and our own existence as sentient beings : in other words, the very first exercise of my con-

consciousness necessarily implies a belief, not only of the present existence of what is felt, but of the present existence of *that* which feels and thinks ; or (to employ plainer language) the present existence of that being which I denote by the words *I* and *myself*. Of these facts, however, it is the former alone of which we can properly be said to be conscious, agreeably to the rigorous interpretation of the expression. The latter is made known to us by a suggestion of the understanding consequent on the sensation, but so intimately connected with it, that it is not surprising that our belief of both should be generally referred to the same origin.*

In the same way we are not said to be conscious of any higher spiritual beings, although we may be conscious of a firm belief, that such exist. We are not conscious of God and of his existence ; although we are so, as all men of the least moral and religious tendencies of mind will readily and gratefully acknowledge, of the idea or notion of a Supreme Author, and of the unalterable belief of his existence.*

§. 79. *The belief from consciousness of the most decided and highest kind.*

Consciousness is not only a law of our belief, but it undoubtedly is one of the most authoritative and decisive ; in other words, the belief, attendant on the exercise of it, is of the highest kind. It appears to be utterly out of our power to avoid believing beyond a doubt, that the mind experiences certain sensations, or has certain thoughts, or puts forth particular intellectual operations, whenever in point of fact that is the case. We may be asked for the

* The views here expressed may be supposed to hold good also in respect to all abstractions whatever, which have a real and objective existence. Accordingly we are not conscious of space and time, on the common supposition of their possessing a distinct and real entity, although we are of the ideas of them, or of those new states of mind, which exist, when space and time are the objects of contemplation.

reason of this belief, but we have none to give, except that it is the result of an ultimate and controlling principle of our nature ; and hence that nothing can ever prevent the convictions, resulting from this source, and nothing can divest us of them.

How often men retire within their own bosoms, shutting up the outward senses, and pleasing themselves with the soul's inward contemplations, with new trains of thought, with many past remembrances, with melancholy or joyful affections ! Now it would be not only as easy, but as rational, to disbelieve the existence of the soul itself, as to disbelieve the existence of these rich and varied experiences, of which it is the subject. In fact, neither the one, nor the other is possible ; nor has the whole history of the mind made known any instances, that have even the appearance of being at variance with this view, except a few cases of undoubted insanity. A man may reason against consciousness as a ground and law of belief, either for the sake of amusing himself or of puzzling others, but when he not only reasons against it as such, but seriously and sincerely rejects it, it becomes quite another concern, and such an one has by common consent broken loose from the authority of his nature, and is truly and emphatically beside himself. It will be impossible to find a resting-place, where such a mind can fix itself and repose ; the best established truths and the wildest and most extravagant notions will stand nearly an equal chance of being either rejected or received ; fancy and fact will be confounded and mingled together ; and the whole mind become a chaos like that of the world when it was without form and void.

CHAPTER FIFTH.

LAWS OF BELIEF. (II) THE SENSES.

§. 80. *General statement as to the confidence placed in the senses.*

THE SECOND law of belief, which it falls to us to consider, is that of the senses. In speaking of the senses in this light, what we mean to say in respect to them is, that the feelings, to which they give rise, are, by our very constitution, the occasion of belief, or are attended by it. In this sense they are a law.

This statement, it will be noticed, involves and takes for granted the truth of the proposition, that belief and sensations go together. Nor is this assumption made without abundant evidence to support it. It must without much inquiry be clear to all, that the convictions and actions of men are daily controlled by the senses. As a general statement, it is undoubtedly true, that, in the judgments, which we constantly form of human conduct, and of the existence, forms, properties, and relations of the material world, no one refuses them his confidence.

What better evidence can there be of the correctness of this statement, than the accordant sentiment and declaration of the great mass of mankind! On this point the feelings, conduct, and sayings of men are prompt and coincident.

When one man states to another a report of what has happened at some time, the hearer yields to him a great-

er or less degree of credence according to circumstances. But if the narrator asserts, that he saw or heard it with his own eyes or ears, that the affair actually came under the cognizance of his own senses, every body deems such an assertion enough ; it is not thought important to inquire farther. But certainly if men believe in their neighbours for this cause, they would believe in themselves for the same cause ; if they rely without hesitation on the sight and hearing of others, not less would they rely on their own.

§. 81. *The belief arising from the senses may be considered in two respects.*

But it is necessary, in order to have a correct conception of this subject, to make a more particular statement.

It will readily occur, that what we term the senses, without delaying to give a specific explanation of them here, are merely forms of bodily organization ; they are in themselves utterly exclusive of any thing of an intellectual kind ; and, therefore, are to be regarded only as the instrument or medium of new mental states. Having premised this, we are prepared to remark further, that, by the constitution of our natures, every affection of the senses, whether from a material or any other cause, is followed by a corresponding affection or state of the mind. The belief, therefore, of which the senses, are the law and the occasion, may be considered in two respects..

In the first place there is a belief attendant on the new feelings, which are thus occasioned, and which has particular reference to those feelings ; we believe them to exist ; and, as they are the direct subjects of our consciousness, there is neither doubt nor disagreement in this particular. From the nature of the case, all our sensations must be precisely such, both in kind and intensity, as we feel them to be. It is the actual feeling, and nothing else, which constitutes the sensation ; and it bears a different name from a multitude of other feelings, not so much in consequence of a difference in itself, as in its immediate cause or antecedent.

In the second place there is a belief also, and perhaps not less strong and decisive, which has relation not to the mere feelings themselves, but to external objects. It is this in particular, which we have reference to, when we speak of the senses as a law of belief. The new feelings, following an affection of the senses, are in some sense the occasions, on which the active and curious mind moves out of the world of its own spiritual and immaterial existence, and becomes acquainted with matter. It is somewhat here as in the reading of a book. When we read, nothing but certain marks or lines, and arranged in a particular order, are directly presented to our senses; but we find them connected with new states of mind, utterly distinct from the direct impression they make. A piece of paper, written upon with these inky delineations, becomes to the soul a sign of the most various and exalted ideas; and in like manner, in the permanent ordering of our mental nature, it is found to be the case, that certain new affections of the mind, provided they are caused by means of the senses, become the signs of various existences, which are wholly diverse from the feelings themselves. We experience the feelings, which all admit to be in themselves neither archetypes nor resemblances of any thing whatever, which is external to the soul; and then at once we become acquainted with a vast multitude of objects, that would otherwise have remained unknown to us; with trees and fields and waters, with the melody of birds and the sounds of the elements, with the sun and moon and stars of the firmament, and with all the forms and beauties and glories of creation.

§. 82. *Objection to reposing confidence in the senses.*

As has been remarked, the objects, of which our sensations are in this way the signs, are attended with belief. On the authority of such feelings as are immediately consequent on an affection of the senses, all mankind, if the evidence of their general conduct and of their express declarations is to be regarded, believe in those objects, as having a distinct and real existence, as having

forms, properties, and relations. Nevertheless without denying the fact of this general reliance on the senses as a ground of belief, an objection has been made to its being well placed. The objection, stated in a few words, is this ; That our senses sometimes deceive us, and lead us into mistakes.

In support of the objection, such instances as the following are brought forward.—The sun and moon appear to the spectator on the earth's surface to be a foot or two in diameter, and little more than half a mile high ; a strait stick, thrust into the water, appears to us crooked, as seen by the eye in that position ; a square tower at a distance is mistaken for a round one ; a piece of ice for a stone ; a brass coin for a gold one. Nor are such mistakes to be ascribed solely to the sense of sight ; they are not unfrequently committed, when we rely on the intimations of the taste and smell, the touch and hearing.

Various facts of the above kind have been brought forward to discredit the senses, and to prevent a reliance on them. It is not necessary to extend the enumeration of them, as these will serve for a specimen of the whole. It may be proper to add, however, that we are reminded also of our dreams, and of the acknowledged fact, that whatever is the subject of them often appears as well defined to our perceptions as what takes place, when we are awake ; and yet there is nothing actually seen or heard.

§. 83. *The senses imperfect rather than fallacious.*

That there are some apparent grounds for the objection, which has been made to a full reliance on the testimony of the senses, it is not necessary to deny. Nevertheless the great mass of the alledged fallacies originating from this cause, notwithstanding the perplexities they have occasioned Malebranche and his predecessors and followers in the same path, admit of a satisfactory explanation.

But before entering into particulars, it is requisite to make the general remark, that the senses are more prop-

erly imperfect than fallacious ; and that they lead us astray, not so much by their own direct action, as in consequence of our expecting too much of them. Now if we keep this in view, and moderate and chasten our expectations by the evidently limited nature of the senses, we shall find less to complain of.

Among other things should it be kept in mind, that each sense acts in its own allotted sphere, and can be auxiliary to the enlargement of our knowledge only within the limits of that sphere. Accordingly, in order to a correct result in any particular case, there may sometimes be need of a combined action ; there may be need of the testimony of other senses. In many cases, where we suppose ourselves to be led into mistakes by the sense of sight, we may obtain a more correct estimation by calling in the aid of the touch. And we are permitted, and we may say, required, to carry out and complete the intimations of the senses by the deductions of reasoning. If the bodily eye alone be unable to give us a correct idea of the sun and moon, the eye of the mind may rightly be called in to its assistance. By this means we can not only indicate the size of those bodies, but mark out the path of their motion ; and thus not only seeing those things, which actually exist, but those, which are to be hereafter, we can predict their position and appearance, before that position and those appearances happen.

§. 84. *Some alledged mistakes of the senses owing to want of care.*

If the course, pointed out in the last section, were always followed, the mistakes we are exposed to would be less frequent. But even when we refer to all the senses, and combine with this reference the deductions of reasoning, we may still err from want of care. Beyond all question some of the mistakes, ascribed to the senses, are owing to premature inferences from them ; to a want of caution, discrimination, and full inquiry.

This particular subject is illustrated as follows by Dr.

Reid.—"Many things called the deceptions of the senses are only conclusions rashly drawn from the testimony of the senses. In these cases the testimony of the senses is true, but we rashly draw a conclusion from it, which does not necessarily follow. We are disposed to impute our errors rather to false information than to inconclusive reasoning, and to blame our senses for the wrong conclusions we draw from their testimony.

"Thus, when a man has taken a counterfeit guinea for a true one, he says his senses deceived him; but he lays the blame where it ought not to be laid: for we may ask him, did your senses give a false testimony of the colour, or of the figure, or of the impression? No. But this is all that they testified, and this they testified truly. From these premises you concluded that it was a true guinea, but this conclusion does not follow; you erred, therefore, not by relying upon the testimony of sense, but by judging rashly from its testimony. Not only are your senses innocent of this error, but it is only by their information that it can be discovered. If you consult them properly, they will inform you that what you took for a guinea is base metal, or is deficient in weight, and this can only be known by the testimony of sense.

"I remember to have met with a man who thought the argument used by Protestants against the Popish doctrine of transubstantiation, from the testimony of our senses, inconclusive; because, said he, instances may be given where several of our senses may deceive us: how do we know then that there may not be cases wherein they all deceive us, and no sense is left to detect the fallacy? I begged of him to know an instance wherein several of our senses deceive us. I take, said he, a piece of soft turf, I cut it into the shape of an apple; with the essence of apples, I give it the smell of an apple; and with paint, I can give it the skin and colour of an apple. Here then is a body, which, if you judge by your eye, by your touch, or by your smell, is an apple.

"To this I would answer, that no one of our senses deceives us in this case. My sight and touch testify that it

~~...the ... of an apple : this is true. The ... it has the smell of an apple : ... no deception. Where then ... it is evident it lies in this, that because ... qualities belonging to an apple, I con- ... an apple. This is a fallacy, not of the sen- ... inductive reasoning.~~

2. *Mistakes in judging of the motion of objects.*

Many false judgments, (continues the same judicious author,) that are accounted deceptions of sense, arise from our mistaking relative motion for real or absolute motion. There can be no deceptions of sense, because by our senses we perceive only the relative motions of bodies ; and it is by reasoning that we infer the real from the relative which we perceive. A little reflection may satisfy us of this.

“It was before observed, that we perceive extension to be one sensible quality of bodies, and thence are necessarily led to conceive space, though space be of itself no object of sense. When a body is removed out of its place, the space which it filled remains empty till it is filled by some other body, and would remain if it should never be filled. Before any body existed, the space which bodies now occupy was empty space, capable of receiving bodies, for no body can exist where there is no space to contain it. There is space therefore wherever bodies exist, or can exist.

“Hence it is evident that space can have no limits. It is no less evident that it is immoveable. Bodies placed in it are moveable, but the place where they were cannot be moved ; and we can as easily conceive a thing to be moved from itself, as one part of space brought nearer to, or removed further from another.

“This space, therefore, which is unlimited and immoveable, is called by philosophers *absolute space*. Absolute, or real motion, is a change of place in absolute space.

• Reid's Intellectual Powers of Man, Essay II.

“Our senses do not testify the absolute motion or absolute rest of any body. When one body removes from another, this may be discerned by the senses ; but whether any body keeps the same part of absolute space, we do not perceive by our senses. When one body seems to remove from another, we can infer with certainty that there is absolute motion, but whether in the one or the other, or partly in both, is not discerned by sense.

“Of all the prejudices which philosophy contradicts, I believe there is none so general as that the earth keeps its place unmoved. This opinion seems to be universal, till it is corrected by instruction, or by philosophical speculation. Those who have any tincture of education are not now in danger of being held by it, but they find at first a reluctance to believe that there are antipodes ; that the earth is spherical, and turns round its axis every day, and round the sun every year. They can recollect the time when reason struggled with prejudice upon these points, and prevailed at length, but not without some effort.

“The cause of a prejudice so very general is not unworthy of investigation. But that is not our present business. It is sufficient to observe, that it cannot justly be called a fallacy of sense ; because our senses testify only the change of a situation of one body in relation to other bodies, and not its change of situation in absolute space. It is only the relative motion of bodies that we perceive, and that we perceive truly. It is the province of reason and philosophy, from the relative motions which we perceive, to collect the real and absolute motions which produce them.

“All motion must be estimated from some point or place which is supposed to be at rest. We perceive not the points of absolute space, from which real and absolute motion must be reckoned : and there are obvious reasons that lead mankind in the state of ignorance, to make the earth the fixed place from which they may estimate the various motions they perceive. The custom of doing this from infancy, and of using constantly a language which supposes the earth to be at rest, may perhaps

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has the shape and colour of an apple : this is true. The sense of smelling testifies that it has the smell of an apple : this is likewise true, and is no deception. Where then lies the deception ? It is evident it lies in this, that because this body has some qualities belonging to an apple, I conclude that it is an apple. This is a fallacy, not of the senses, but of inconclusive reasoning.”*

§. 85. *Of mistakes in judging of the motion of objects.*

“Many false judgments, (continues the same judicious writer,) that are accounted deceptions of sense, arise from our mistaking relative motion for real or absolute motion. These can be no deceptions of sense, because by our senses we perceive only the relative motions of bodies ; and it is by reasoning that we infer the real from the relative which we perceive. A little reflection may satisfy us of this.

“It was before observed, that we perceive extension to be one sensible quality of bodies, and thence are necessarily led to conceive space, though space be of itself no object of sense. When a body is removed out of its place, the space which it filled remains empty till it is filled by some other body, and would remain if it should never be filled. Before any body existed, the space which bodies now occupy was empty space, capable of receiving bodies, for no body can exist where there is no space to contain it. There is space therefore wherever bodies exist, or can exist.

“Hence it is evident that space can have no limits. It is no less evident that it is immoveable. Bodies placed in it are moveable, but the place where they were cannot be moved ; and we can as easily conceive a thing to be moved from itself, as one part of space brought nearer to, or removed further from another.

“This space, therefore, which is unlimited and immoveable, is called by philosophers *absolute space*. Absolute, or real motion, is a change of place in absolute space.

* Roid’s Intellectual Powers of Man, Essay II.

“Our senses do not testify the absolute motion or absolute rest of any body. When one body removes from another, this may be discerned by the senses ; but whether any body keeps the same part of absolute space, we do not perceive by our senses. When one body seems to remove from another, we can infer with certainty that there is absolute motion, but whether in the one or the other, or partly in both, is not discerned by sense.

“Of all the prejudices which philosophy contradicts, I believe there is none so general as that the earth keeps its place unmoved. This opinion seems to be universal, till it is corrected by instruction, or by philosophical speculation. Those who have any tincture of education are not now in danger of being held by it, but they find at first a reluctance to believe that there are antipodes ; that the earth is spherical, and turns round its axis every day, and round the sun every year. They can recollect the time when reason struggled with prejudice upon these points, and prevailed at length, but not without some effort.

“The cause of a prejudice so very general is not unworthy of investigation. But that is not our present business. It is sufficient to observe, that it cannot justly be called a fallacy of sense ; because our senses testify only the change of a situation of one body in relation to other bodies, and not its change of situation in absolute space. It is only the relative motion of bodies that we perceive, and that we perceive truly. It is the province of reason and philosophy, from the relative motions which we perceive, to collect the real and absolute motions which produce them.

“All motion must be estimated from some point or place which is supposed to be at rest. We perceive not the points of absolute space, from which real and absolute motion must be reckoned : and there are obvious reasons that lead mankind in the state of ignorance, to make the earth the fixed place from which they may estimate the various motions they perceive. The custom of doing this from infancy, and of using constantly a language which supposes the earth to be at rest, may perhaps

be the cause of the general prejudice in favour of this opinion.

“Thus it appears, that if we distinguish accurately between what our senses really and naturally testify, and the conclusions which we draw from their testimony, by reasoning, we shall find many of the errors, called fallacies of the senses, to be no fallacy of the senses, but rash judgments, which are not to be imputed to our senses.”

§. 86. *Of mistakes as to the distances and magnitude of objects.*

One class of the fallacies by means of the senses is made up of those errors we commit in our perceptions of the distance of objects. Our sight, it is said, often represents objects to be near which are distant, and objects to be distant, which are near. That we often form erroneous judgments as to the distance of objects, is true; but it is a mistaken sentiment, which ascribes these erroneous opinions exclusively to the misrepresentations of the sight, or of any other sense. The subject of distance will shortly come up again; and we shall, therefore, anticipate it only so far as to remark, that the perception of distance is not an original act of the sight, but is something acquired. We are not properly said to see distance, but rather to judge of distance by sight; and hence the data, furnished by that sense, may be right, and still the conclusion, deduced from them, be wrong.

II.—Another class of errors are those of magnitude. The notions, which we form on that subject also, are acquired, and not original. We judge objects to be great or small in comparison with ourselves or with one another; and not in consequence of any thing, which is directly and immediately perceived in the objects themselves. We might call many objects small, which happened to be of the size of a particular diamond, and yet not inaccurately speak of the diamond itself as a very large one; and this for the simple reason, that our notions of large and small are not absolute but relative, and are formed by repeated acts of comparison. If there were but one object in creation beside ourselves, and if we could

not reason from ourselves to that object, we could not possibly form any notion of its magnitude as distinct from the mere idea of extension. It is very clear our senses could not of themselves authorize us to speak of such an object as large or small. Nor could it be done by reasoning, inasmuch as there are supposed to be no other objects, with which to compare it.—These few remarks, the correctness of which may more fully appear hereafter, will suffice to evince, that such mistakes, as may exist in regard to the distance and magnitude of objects, are not exclusively attributable to the senses.

§. 87. *The senses liable to be diseased.*

There is one respect, however, in which it is perhaps true, that we can speak with propriety of deceptions, arising from the cause now under consideration. The body as a whole being liable to be diseased, the senses as a part of the physical system are of course not exempted from this liability. As a mere question of fact, it cannot be deemed a matter of doubt, that the senses are often physically disordered; and at such times all persons are liable to be led astray by them. What is sweet to persons ordinarily, may appear bitter to one with a diseased palate; what is white to the mass of mankind may appear of a yellow hue to one, whose organ of sight is diseased; the physical condition of the sense of touch may be so perverted as to lead the diseased person to imagine he is made of glass or feathers instead of flesh and blood.

But it is surely enough to say, in respect to cases of this kind, that such is the condition of humanity, the common allotment, stamped both upon body and mind, and on all their powers; and he, who knows it not, has, in great likelihood; studied more carefully the powers and excellencies, than the infirmities of human nature.

What principle in our mental constitution is not liable to be perverted? What susceptibility is not liable to find its action suspended? What strength is there, that may not be weakened? Or what beauty that may not be deformed? In all our conduct we rely, and very correctly,

on the MEMORY, but the laws, which sustain that inestimable faculty, will sometimes grow weary, inconstant, and treacherous. We rely with equal readiness on the REASONING power; no one doubts, that its conclusions are a ground of belief. But what is reasoning, when uttered in the ravings of a madman, or when drawing its conclusions in a lunatic asylum?

It follows, therefore, if the senses deceive us in the case we are now attending to, the fault, if such it is to be considered, is not an exclusive one. It belongs to other parts of our nature also, not excepting its noblest and most efficient characteristics.

§. 88. *Our knowledge of the material world from the senses.*

It will be noticed, that, in what has been said, we have taken for granted the actual existence of an external material world; and we may add here, that it is by means of the senses we have a knowledge of such existence. It would have been premature to have adverted particularly to this subject, without first noticing and disposing of the objection, that the senses are not entitled to our reliance. From what has been brought forward, it clearly appears, that the position of their leading us astray does not hold good, when we separate the proper objects of them from what are not, and when we guide and carry out the intimations of one sense by the aids of the others and of the reasoning power.

In respect to the topic now especially to be considered, it may perhaps be said with confidence, that no man, who employs the senses at all, can doubt of the real existence of an external, material creation. All external nature is operating upon us from the very moment of our birth; and giving origin, consistency, and strength to this belief. The resistance, which bodies present to the touch, when that sense is impressed upon them by the agency of the muscles, probably gives occasion for the distinct and essential idea of externality; and with this idea the senses soon enable us to associate others, as extension, colour, form, and all material qualities and properties. In this

way we become acquainted with the whole outward world, which, we are now prepared to assert explicitly, has an actual and independent existence.

But a new train of thoughts arises here. It may be said that the mere fact of our having ideas of externality, extension, colour, and the like, does not necessarily involve and imply the true and actual existence of those things, which they represent, or of which they are supposed and believed to be the effect. In other words we may possess certain internal affections, and attribute them to something external and material as their cause; and we may truly and sincerely believe the reality of such a cause, while in point of fact it does not exist; and, consequently, our conviction of a truly existing material world may be a self-imposition and delusion.—On this view of our exclusion from any satisfactory knowledge of a material world, which is not so singular as not to have had some acute advocates, a few remarks are to be offered.

§. 89. *Correctness of their testimony in this respect.*

The first remark, which we have to make, concerns the mere fact of belief. We have already made the declaration with confidence, that no man, who makes use of the senses at all, can doubt of the reality of external material things. It is no presumption to assert, that the belief of the reality of an external cause of our sensations is universal. This is the common feeling, the common language of all mankind.

Those, who deny the propriety of relying on the evidence of the senses for the existence of the material world, and who deny such existence, should explain this belief. That such a belief exists, cannot be denied; that it is a false belief, an unfounded conviction, ought not to be lightly asserted. It was too much, as even a slight examination would suffice to show, with the sentiments of man's moral and religious constitution.

It is to be acknowledged with gratitude, that the great mass of mankind fully believe in the existence of

the Deity, a being of perfect truth as well as benevolence. But to create man so that he should be irresistibly led to believe in the existence of a material world, when it did not exist, to create him with high capacities of thought, feeling, and action, and then to surround him with mere illusive and imaginary appearances, does not agree with that notion of God, which we are wont to entertain. Mr. Stewart, in speaking of the metaphysical inquiries of Des Cartes, observes, that his reasonings led him to conclude, that God cannot possibly be supposed to deceive his creatures ; and, therefore, that the intimations of our senses and the decisions of our reason are to be trusted to with entire confidence, wherever they afford us clear and distinct ideas of their respective objects.

In the second place, it will undoubtedly be admitted that the sensations, which have been spoken of, have an existence. This existence is wholly internal ; but still the simple fact remains that they exist ; our consciousness must decisively teach us so. But it has been laid down as a primary truth, a first principle, that there is no beginning or change of existence without a cause. This is an elementary principle, placed as far above all objection and scepticism as any one can be, and evidently preliminary to the full exercise of reasoning.

And where then is the cause of these internal effects ? What man, who denies the existence of the material world, is able to indicate the origin of these results ? If, yielding to the suggestions of our nature and the requisitions of our belief, we seek for a cause external to ourselves, we find a satisfactory explanation ; otherwise we may expect to find none of any kind.

§. 90. *The senses as much grounds of belief as other parts of our constitution.*

FURTHERMORE, it must be admitted, as has already been particularly stated and shown, that there are certain original sources or grounds of belief in our constitution. To say otherwise would be to loosen and destroy the foundations of all knowledge, whether that knowledge concern-

ed matter or mind. But what evidence is there, that there are such original sources of belief, or that any one thing in particular is the foundation of such belief more than any other thing? The answer is, our own internal consciousness and conviction, and this merely; we are conscious of belief, and are able to trace it to the occasions which give it rise.

Now if we carefully examine our minds, we shall find, that the intimations from the senses as effectually cause belief, as any other source of evidence whatever. Our consciousness, our internal conviction tells us, that our belief is as decisively regulated by the perceptions, derived through the senses, as by our intuitive or inductive perceptions; and that they are as much a ground of knowledge. We assert this with confidence; therefore, if the senses are not a ground of belief and knowledge, the way is fairly open for unlimited scepticism on all subjects. It will in this case be impossible to fix upon any thing whatever, which is to be received as evidence, and men must give up all knowledge of intellect as well as matter, and will be at once released from all moral obligation.

§. 91. *Opinions of Locke on the testimony of the senses.*

As the satisfactory understanding of this subject is of much practical importance, we shall close what has been said upon it by some passages from Locke, whose clearness of apprehension never fails him, and who has the advantage of proposing his opinions in a diction, though somewhat antiquated, yet free, plain, and energetic,—“If after all this, (he says in the Fourth Book of his Essay,) any one will be so skeptical as to distrust his senses, and to affirm that all we see and hear, feel and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, whereof there is no reality; and therefore will question the existence of all things, or our knowledge of any thing; I must desire him to consider, that, if all be a dream, then he doth but dream that he makes the question; and so it is not much matter that a waking man should answer him. But yet,

if he pleases, he may dream that I make him this answer, that the certainty of things existing in *rerum natura*, when we have the testimony of our senses for it, is not only as great as our frame can attain to, but as our condition needs. For our faculties being suited not to the full extent of being, nor to a perfect, clear, comprehensive knowledge of things, free from all doubt and scruple ; but to the preservation of us, in whom they are, and accommodated to the use of life ; they serve to our purpose well enough, if they will but give us certain notice of those things which are convenient or inconvenient to us. For he that sees a candle burning, and hath experimented the force of its flame, by putting his finger in it, will little doubt that this is something existing without him, which does him harm, and puts him to great pain : which is assurance enough, when no man requires greater certainty to govern his actions by than what is as certain as his actions themselves. And if our dreamer pleases to try whether the glowing heat of a glass furnace be barely a wandering imagination in a drowsy man's fancy ; by putting his hand into it he may perhaps be wakened into a certainty greater than he could wish, that it is something more than bare imagination. So that this evidence is as great as we can desire, being as certain to us as our pleasure or pain, *i. e.* happiness or misery ; beyond which we have no concernment, either of knowing or being. Such an assurance of the existence of things without us is sufficient to direct us in the attaining the good, and avoiding the evil, which is caused by them ; which is the important concernment we have of being made acquainted with them."

CHAPTER SIXTH.

LAWS OF BELIEF. (III) TESTIMONY.

§. 92. *Of testimony and the general fact of its influencing belief.*

WE shall next consider HUMAN TESTIMONY. By this is commonly meant the report of men concerning what has fallen under their personal observation. And this forms a third law or ground of Belief.

As to the fact, that men readily receive the testimony of their fellow beings, and that such testimony influences their belief and conduct, it cannot be denied. If a person should seriously deny the truth of a well attested statement in history, or question the well attested existence of a distant nation or city, merely because the evidence happened to be that of human testimony, it would be thought truly strange and unaccountable.

And surely if it were otherwise, if there were not this prompt and confiding reliance on testimony, a state of things would be presented very different from what actually exists. Without a general confidence in what men assert, every one's knowledge of events and facts would be limited to those only, of which he himself had been a personal witness. In this case no American, who had not been a traveller, could believe, that there is such a city as London; and no Englishman in a like situation could believe, that there is such a city as Rome; and no person whatever has any ground for be-

believing, that such men as Hannibal and Caesar have ever existed.

With the great mass of mankind the exclusion of testimony as a ground of belief would be the means of depriving them of the greater part of what they now know. The vast world would be only what they themselves see, an *ORBIS TERRARUM*, bounded by the narrow range of their native hills; the renowned men and deeds of the world would be summed up in the persons and acts of the private circle of their acquaintances; myriads of human beings, tribes and nations of men, uncounted abodes of life, and numberless works of genius would virtually pass away and be lost. Their condition would be less favourable than that of Virgil's shepherd, who believed in the existence of the Imperial City, the reports of which had reached him in his solitudes, and only mistook in comparing great things with small, and in supposing it to be like those humble villages of Mantua, where he had tended his flocks.

§. 93. *Of the various explanations of the origin of confidence in testimony.*

Admitting the fact, that men place great confidence in testimony, and that without such confidence one principal source of knowledge would be shut up, a question nevertheless arises here, What is the ground of this reliance? In some points of view this inquiry is probably of less importance than the mere question of the fact; still the subject cannot be wholly neglected, consistently with the desire of giving a succinct view at least of the mind in all its parts.

It is proper to remark first, however, that the credence or reliance in question exhibits itself at a date earlier than any period our recollection goes back to; and, therefore, it is impossible to explain the grounds of it with absolute certainty. That provision has in some way been made for a belief in the declarations of our fellow beings, is a fact; and that it takes effect very early in life, is a fact

also ; but further than this, we can only offer explanations more or less probable.

Having made this remark, we are prepared to observe, that a number of explanations, as might be expected, and differing more or less from each other, have been given. One is, that credence in testimony is natural or constitutional ; in other words is an elementary and original tendency of our being. The advocates of this opinion maintain, that the very nature of our mental constitution, independently of the suggestions of reasoning and experience, leads us to believe what men assert. We are so constituted, that the very first sound of the human voice, which reaches us, calls into action a disposition on our part to admit the truth of whatever intelligence it conveys.

In support of this view, which has in its favour the names of Reid and Campbell among others, reference is made to what we observe in children. In the earliest period of life, as soon as the first gleams of intelligence are visible, they look with hope and fondness to those, who support them ; there seems to be no doubt, no suspicion, no want of confidence. This strong reliance discovers itself from time to time, as they advance towards youth ; and, in the whole of the early part of our existence, is so distinct, strong, and operative, that men have given to it a specific name, in order to distinguish it from the more chastened credence of riper years. We speak of the caution and the convictions of manhood, and of the simplicity and **CREDULITY** of children.

It is further contended, that the principle of a natural reliance on the declarations of our fellow beings is involved in, and is indispensable to the propensity, which all philosophers admit man to have for society. This propensity will not be passed by without remark at some future time. It will suffice to observe here, that man is born in society, and is never out of it ; society is his element ; and a state of nature in the literal sense of the terms is only imaginary. When we think, therefore, of the wise Being, from whom man comes, and who cannot

be supposed to have placed him in his present situation without foresight and intention, we naturally conclude, that he is, and ever was designed for society, and that he is made meet for his destination.

But what is implied in a meetness for living together? What is requisite to preserve the bond, that binds in one families, and neighbourhoods, and states? Among other things, very evidently the principle in question; a confidence in men, a reliance on their statements.

§. 94. *Connection of a reliance on testimony with a disposition to utter the truth.*

Another explanation of the origin of the principle of credence, and somewhat different, has been given. The train of thought is this.—It requires but a little examination of ourselves to become satisfied, that it is according to the nature of men to speak the truth. Every person must be supposed to feel, that lying is not accordant with the original principles of his being; that every falsehood he tells degrades and diminishes him in his own eyes; that truth is the natural and appropriate result of the mind. This conviction is one of the earliest we have; but there is another not less early, and perhaps still more so in its origin, viz. our belief in the uniformity of the laws of nature.

Combining these two together, we are able to generalize, as it were, our own character. Sustained by the primary truth which has just been referred to, we are led to conclude, that what is humanity in ourselves is human nature in all, in whom we perceive the same outward likeness; in other words we promptly and unfailingly recognize in our own love of veracity a distinctive feature in the mental character of our fellow beings. Under these circumstances a reliance on human testimony is unavoidable. And it may be added, that this reliance, supposing it to have the origin which has now been stated, exists and operates at a period so early as to answer all the purposes requisite in the forming and support of society.

§. 95. *This reliance greatly confirmed by experience.*

Others again ascribe the origin of the credence, which we give to testimony, to experience; that is to say, to our observation of a conformity in the reports of men to the facts alledged by them. Men make assertions; we find them to be true, and in this way we learn or acquire a confidence. But the difficulty is in reconciling this explanation with the very early period of life, in which the credence in question is known, in a greater or less degree, to manifest itself.

But whether this explanation of the origin of our reliance on testimony be admissible or not; it is certain, that experience or observation has much to do in strengthening it. At a period further back than we can now remember, we heard declarations, which our experience but seldom, and perhaps never found to be untrue. The truth was poured into our ears by the voice of affection; it became associated with parental love; as we look back we find it interwoven with all our earliest recollections, and inseparable from whatever we enjoyed, honoured, and revered.

If, therefore, reliance on men's testimony be truly a plant, naturally springing up in the soil of the human heart, it will be found to be nourished and sustained not only by experience, but by the influence of the most sacred remembrances.

§. 96. *Objection to our reliance on testimony.*

After all it may be inquired, whatever may be the fact of our reliance on testimony or of the origin of the same, Whether this reliance be justly and properly placed? And in support of this inquiry, it may no doubt be asserted as an undeniable fact, that we are liable to be led into mistakes by the statements of our fellow-men. This objection to the views, which have been given, merits some attention; and the answer to it may be summed up in two particulars.

First; the proportion of cases of deception, com-

pared with those where we are not deceived, is very small. Few persons are perhaps fully aware, to what extent, and in what numberless instances we rely upon the information and the assertions of others. "Every hour of our lives, (says Dr. Paley, *Moral Philos. Bk. III. ch. V.* we trust to, and depend upon others; and it is impossible to stir a step, or, what is worse, to sit still a moment, without such trust and dependence. I am now writing at my ease, not doubting, (or rather never distrusting, and therefore, never thinking about it,) but that the butcher will send in the joint of meat, which I ordered; that his servant will bring it, that my cook will dress it; that my footman will serve it up; and that I shall find it upon the table at one o'clock. Yet have I nothing for all this but the promise of the butcher, and the implied promise of his servant and mine. And the same holds of the most important, as well as the most familiar occurrences of social life."

But are we wrong in relying on the declarations, both implied and express, in such cases as this, and in others similar? Certainly not. We may be deceived and disappointed sometimes, but not often, in comparison with the whole number of cases where we place reliance. Men are naturally disposed to speak the truth; it is much easier than to speak what is not true, for truth is at hand, but the practice of prevarication and mis-statement requires labour, and invention, besides conflicting with the general estimate of human character, and jarring violently upon every honourable sentiment within us. So capable is this view of being sustained, that even those men, who have brought upon themselves the infamy of being considered liars, probably utter the truth an hundred times, where they utter a falsehood once.

§. 97. *Further remarks on this objection.*

SECOND; Admitting, that we are liable to be led astray by means of testimony, still it is in our power, and is our duty to take suitable precautions against this liability, as in other cases. The errors, into which we are some-

times led from this source, are analagous to those, into which we are sometimes betrayed by means of the senses, and which, as they were found to be owing more to our own carelessness and haste than any thing else, were not thought sufficient to reject the senses from being considered grounds of belief and knowledge. In neither case are we exposed to errors without the means of guarding against them ; and in respect to human testimony in particular we are by no means required to place implicit confidence in it, without a regard to the circumstances under which it is given, and the character and opportunities of the person who gives it. Every one knows, that there are in himself tendencies and principles, which, in certain circumstances, may be brought in conflict with the more ennobling principle of truth ; and that he is liable to error, even when he supposes himself to be seeking the truth, from the mere want of labour and care. And we may make use of this experience in judging of the testimony of others, since we may reasonably suspect in them the existence of similar tendencies, and similar want of circumspection. It is, therefore, consistent with any suitable degree of reliance on testimony to satisfy ourselves, whether the person, who testifies, possessed ample means of information ; whether he made use of those means ; and whether he may not be under the influence of interest or passion.

CHAPTER SEVENTH.

LAWS OF BELIEF. (IV) MEMORY.

§. 98. *All men place a reliance on memory.*

IN addition to the grounds of belief, which are to be found in consciousness, the senses, and testimony, we find another original occasion or law of the same in the Memory.—In our goings from place to place, and from one scene of action to another, in our meetings and conversations with men, and in our multiplied labours and relaxations, joys and sufferings, we see and hear and do what will perhaps afterwards never come within the range of our experience. When we subsequently act upon what has thus been once under the examination of the senses, or has in any other way come within our direct personal experience, we indicate our reliance on the remembrance. The thing itself has passed away ; but the remembrance of it remains ; and with the remembrance an unwavering belief, that the object of it once was. So far as we are confident, that the original perceptions are correctly reported in the remembrance, the latter controls our belief and actions not less certainly than those perceptions.

Says Dr. Beattie in some remarks on this subject, “ The evidence of memory commands our belief as effectually as the evidence of sense. I cannot possibly doubt, with regard to any of my transactions of yesterday which I now remember, whether I performed them or not. That I dined to day, and was in bed last night, is as certain to me,

as that I at present see the colour of this paper. If we had no memory, knowledge and experience would be impossible ; and if we had any tendency to distrust our memory, knowledge and experience would be of as little use in directing our conduct and sentiments, as our dreams now are. Sometimes we doubt, whether in a particular case we exert memory or imagination ; and our belief is suspended accordingly : but no sooner do we become conscious, that we *remember*, than conviction instantly takes place ; we say, I am certain it was so, for now I remember I was an eye-witness.”*

§. 99. *Limitations of our reliance on memory.*

It will be observed, that there is an express limitation of this general view in the remarks of the foregoing section. It is only when we have no reason to doubt of our original experiences being correctly reported in the remembrances, that our reliance on them is of the highest kind. It is the same here as in respect to the senses and testimony ; we confidently rely on the memory, but are not exempt from some degree of exposure to error from it ; although as in those cases, it is an exposure, which we are able to guard against with suitable care and pains.

In what way, and in what particulars this caution and pains are to be exerted, it is not necessary minutely to detail here. One thing however, seems to be in general certain, that we are not led into error by means of the memory ignorantly, and without the ability to guard against it. Every man knows from a species of internal feeling, or at least is able to satisfy himself in some way, whether there be grounds for doubting his memory in any particular case or not. If it be the fact that he finds reason for suspecting its reports, his reliance will either be diminished in proportion to this suspicion, or he will take means, if he be able to, to remove the grounds of such suspicion.

*Beattie's Essay on Truth, Pt. I, ch. II, §. 4.

It cannot reasonably be anticipated, that any objection will be made to the doctrine of a reliance on memory, with the limitation which has now been mentioned. Without such reliance, our situation would be no better at least than if we had been framed with an utter inability to rely on Testimony ; we could hardly sustain an existence ; we certainly could not derive any thing in aid of that existence from the experience of the past.

§. 100. *Origin of man's reliance on memory.*

There remains, however, another inquiry, What is the origin of this confident reliance? What are the grounds of it? And the reply here is, as in many other cases ; It is our nature, our mental constitution, the will and ordinance of the Being, who created us. Whatever may be said on the subject, there must be, and there are certain original grounds, certain fundamental laws of belief, which, in every analysis of our knowledge, are fixed and permanent boundaries, beyond which we cannot proceed. And reliance on memory is one of them.

It cannot be said of this reliance, that it depends on experience, for the simple reason, that we cannot reason from experience, without first implying, and resorting to confidence in memory. The assumption of memory as a ground and law of belief is necessarily antecedent to all deduction. Nothing remains, therefore, but to repeat, that reliance on memory is a law of our nature, an ultimate principle and tendency of our mental being.

§. 101. *Memory the occasion of belief further than what is actually remembered.*

There remains, however, a remark, relating to another topic connected with the memory, which is worthy of some attention, viz. That memory is an indirect ground of belief further than what is actually remembered. If this remark be not obvious at first, it may be made so by some brief considerations.

Whatever may be the cause of it, it is very well known, that a great portion of our knowledge exists in the shape

of general principles. To these principles we were originally led by trains of thought more or less long and intricate. But as in these trains of thought it was the results of them we chiefly sought after, it naturally happened, that the antecedent reflections and arguments were soon forgotten ; and the conclusions only or general principles remained. It is the fact, however, that when we recall such general truths as control our belief and conviction, we at the same time believe, that facts and arguments, having a definite relation to these results, formerly existed, and were contemplated by the mind, although they have now irretrievably faded from our recollection.

For instance, in demonstrative reasoning, a man has proved to his entire conviction and satisfaction, that the three angles of a triangle are equal to two right angles ; or in moral reasoning, has proved to equal satisfaction, that it is the duty of men to fulfil their promises. In these and similar cases, he subsequently not only relies on the remembrance of his having experienced a deep conviction of the general truth at a particular time, but the remembered conviction is the occasion of originating in him a firm reliance on what he does not remember, viz, on facts, comparisons, and arguments, which are now known to the mind only by the abstract conception of their antecedent existence, and of their suitableness, whatever they might have been, to produce such conviction.

CHAPTER EIGHTH.

LAWS OF BELIEF.

(V) RELATIVE SUGGESTION AND REASONING.

§. 102. *Meaning of Relative Suggestion and its connection with belief.*

ANOTHER ground or law of belief of such a nature, as to be entitled to a distinct consideration, is **RELATIVE SUGGESTION**. By this phrase, which has of late received a definite application in Mental Philosophy, is expressed the power or susceptibility, by means of which we perceive the relations of objects. What **RELATIONS** themselves are, it is unnecessary to attempt to define ; no mere form of words can render the conception of them clearer to any person's comprehension, than it is already supposed to be. All, that needs be asserted, is the mere statement of the fact, that, when the mind contemplates two or more objects, we naturally put forth other perceptions or feelings ; we cannot avoid doing it. For instance, we feel or perceive such objects to be the same or different, like or unlike, equal or unequal, cause or effect, whole or part, attribute or subject, &c.

These new feelings, as well as the direct perceptions of the objects, to which they relate, are occasions of belief. We not only believe the existence of the feelings themselves, but find ourselves unable to resist and exclude the belief of the actual existence and truth of that, to which they correspond. To employ a phraseology, which

seems to be coming into use, we believe in the *objective* reality of relations as well as in the *subjective* feelings, which interpret their existence and character to the mind. The relations of things, it is true, are not objects, directly addressed to the external senses ; as we cannot directly see them, nor hear them, nor feel them, they seem comparatively obscure ; and yet we are so constituted, that the cognizance of them is utterly inseparable from those perceptions, which we have both by means of the senses, and in any other way ; they are perceivable by the mind, and are undoubtedly, in some important sense, real subjects of contemplation and knowledge.—It is in this way, that **RELATIVE SUGGESTION**, the name of the susceptibility, by means of which we become acquainted with relations, is a **LAW OF BELIEF**.

§. 103. *Classes of relations and intuitive perceptions of relation.*

The relations, which we are able to discover on a careful contemplation of objects, are almost innumerable, but attempts have been made, multiplied as they are, to reduce them to certain classes ; for instance, to the general classes of Coexistence and Succession, and these again to the subordinate classes of position, resemblance or difference, degree, proportion, and the like.

But it is not necessary to enter into that inquiry here any further than to say, that some relations are more readily perceived than others. The mind may hesitate, in some cases, in perceiving or feeling the relation of cause and effect, of proportion, of subject and attribute ; but this is not the case in general with those of agreement or disagreement, similitude or dissimilitude. The mind is so prompt in perceiving these relations, in ascertaining the agreement or difference, the identity or diversity of objects, that its perceptions in such cases are frequently distinguished by a distinctive name, and are termed **INTUITIVE**. There is no delay, no perplexity in perceiving, that red is not white, or that a square is not a circle, but the mind has a knowledge of the relations here at once, and

without the intervention and help of any other ideas.

Mr. Locke happily remarks in respect to perceptions of this sort, that like bright sunshine they force themselves immediately to be perceived, as soon as ever the mind turns its view in the direction of them, and leave no room for hesitation and doubt.

§. 104. *Of the intuitive perceptions called axioms.*

It is proper to remark here, that certain intuitive perceptions, when without reference to particular cases they are considered in the abstract, and are embodied in words, are termed **AXIOMS**; such as *The whole is greater than a part*; *Things equal to the same are equal to one another*; *From equals take away equals, and the remainders are equal*.

It must be evident to every one, that if the mind had been so constituted as to be incapable of putting forth the feelings implied in axioms, there could have been no mathematical deduction and demonstration. It is the power of **Relative Suggestion**, exerted in originating these intuitive perceptions, which enables the mind in the abstract sciences to go on from step to step, till it arrives at last at the most remote and difficult conclusions.

§. 105. *Of reasoning as a ground of belief.*

What has just been said leads us to remark further in general terms, that all Reasoning, both Moral and Demonstrative, and in whatever form it exists, is a law of belief. But it is proper to observe, by way of explaining the introduction of this subject in this particular connection, that every train of reasoning implies, and involves a series of felt or perceived relations. These feelings of relation may be regarded as the links, which bind together such separate perceptions, facts, or truths, as come within the range of the subject reasoned upon, and without which they would inevitably remain in their original state of insulated and unavailable propositions. Truth is added to truth, feeling arises successive to feeling, until we arrive at the conclusion, which invariably fixes our belief.

The conclusion is properly a mere feeling of relation; but it is one, which could not have existed without the preceding steps, without a succession of propositions; and in that point of view, Reasoning may properly be considered a ground of belief, distinct from Relative Suggestion.

When, however, we assert, that the conclusions, deduced from a process of reasoning, invariably influence our belief, we should particularly keep in mind here, that belief may exist in very various degrees. When the successive feelings, which we have in a train of reasoning, are all intuitive, and the propositions, with which we commenced, were certain, or were assumed as such, belief is of course of the highest kind. And this is always the case in demonstrations; for there we always begin either with known or assumed truths, and as the propositions compared together are entirely abstract, there seems to be no room for doubt or mistake. But in moral reasoning, although the mental process is the same, the conclusion is not necessarily true; the propositions contemplated are in general of a different character from what we find in demonstrative reasoning; and the conclusion will vary from mere presumption to absolute certainty according to the nature of the facts laid before the mind.

§. 106. *Evidence that men confide in the results of reasoning.*

But is it a fact, that Reasoning necessarily controls our convictions in any case? What evidence is there, that our belief, in a greater or less degree, is naturally dependent on its conclusions?—If we can suppose such a question to be seriously put, a prompt and satisfactory answer is to be found in the general, and in individual experience. No man has it in his power to refuse obedience to the decisions of reasoning; nor does he ever do it, except from an inability to embrace at once, and to balance the successive steps of the process. On this point it is useless to delay; a few words will be enough.

If this principle, that reason is naturally fitted to cause

and control belief, be not true, we may sit down¹ and read Euclid's Elements and Newton's Principia, and after all reject every conclusion, to which they come ; we may study the profound orations of the great ancient orators, and still entertain the idea, that Philip's character was not dangerous to Greece, nor that of Cataline to the Roman republic ; we may read the speeches of the classic names of the British Parliament, without a recognition of the base and iniquitous abomination of the Slave trade ; in a word we shall act rightfully and consistently in defacing the diagrams of mathematicians, in destroying the charters of scientific corporations, in shutting the halls of justice, and in disbanding the legislative assembly.

Independently of the consequent belief, the power of reasoning loses its value, and is gone forever : Where there is no reasoning, there is of course no deliberation, no eloquence, no knowledge of any kind, except what is directly and intuitively possessed.

CHAPTER NINTH.

LAWS OF ASSOCIATION. (I) PRIMARY LAWS.

§. 107. *Meaning of association and extent of its applications.*

OUR thoughts and feelings follow each other in a regular train. Of this statement no one needs any other proof, than his individual experience. We all know, not only that our minds are susceptible of new states, but what is more, that this capability of new states is not fortuitous, but has its laws. Therefore, we not only say, that our thoughts and feelings succeed each other, but that this antecedence and sequence is in a *regular* train. To this regular and established consecution of the states of the mind we give the name of **MENTAL ASSOCIATION**.

And it is proper to suggest here, that this part of our constitution is worthy of the most attentive consideration. Although at present all we have to do is to consider its general nature and its laws, many portions of our subsequent inquiries will help to illustrate its particular applications, its extent, and power. It exerts its influence on almost every thought ; it binds its efficacy on almost every emotion. Whatever the time or place, the period of life, the allotment of rank or degradation, of joy or suffering, of sad solitude or bustling notoriety, it makes no difference ; it never fails to found its empire, and to put forth its supremacy, wherever there is a mind to contemplate, and a heart to feel.—“When I was travelling through

the wilds of America, says the eloquent Chateaubriand, I was not a little surprized to hear, that I had a countryman established as a resident, at some distance in the woods. I visited him with eagerness, and found him employed in pointing some stakes at the door of his hut. He cast a look towards me, which was cold enough, and continued his work, but the moment I addressed him in French, he started at the recollection of his country, and the big tear stood in his eye. These well known accents suddenly roused in the heart of the old man, all the sensations of his infancy. In youth we little regret the pleasures of our first years; but the further we advance into life the more interesting to us becomes the recollection of them; for then every one of our days presents a sad subject of comparison.”*

§. 108. *Of the term Association and its general laws.*

The term, ASSOCIATION, is perhaps preferable to any other. It may, with no little appearance of reason, be objected to the word, SUGGESTION, which has sometimes been employed, that it seems to imply a positive power or efficiency of the preceding state of the mind in producing the subsequent. But of the existence of such an efficiency we have no evidence. All that we know is the fact, that our thoughts and feelings, under certain circumstances, appear together and keep each other company;—And this is what is understood to be expressed, and is all, that is expressed, by the term, ASSOCIATION.

By the Laws of association, we mean no other than the general designation of those circumstances, under which the regular consecution of mental states, which has been mentioned, occurs. The following may be mentioned as among the primary, or more important of those laws, although it is not necessary to take upon us to assert, either that the enumeration is complete, or that some better arrangement of them might not be proposed, viz., RESEMBLANCE, CONTRAST, CONTIGUITY in time and place, and CAUSE and EFFECT.

*Chateaubriand's recollections of Italy, England, and America.

§. 109. *Resemblance the first general law of association.*

New trains of ideas and new emotions are occasioned by resemblance; but when we say, that they are occasioned in this way, all that is meant, is, that there is a new state of mind, immediately subsequent to the perception of the resembling object. Of the efficient cause of this new state of mind under these circumstances, we can only say, the Creator of the soul has seen fit to appoint this connection in its operations, without our being able, or deeming it necessary to give any further explanation. A traveller, wandering in a foreign land, finds himself in the course of his sojournings in the midst of aspects of nature not unlike those, where he has formerly resided, and the fact of this resemblance becomes the antecedent to new states of mind. There is distinctly brought before him the scenery, which he has left, his own woods, his waters, and his home.—The emperor Napoleon, whose present cares might be supposed to have broken the chain of thought and feeling, that bound him to the past, is said to have once expressed himself thus. “Last Sunday evening, in the general silence of nature, I was walking in these grounds, (of Malmaison.) The sound of the church-bell of Ruel fell upon my ear, and renewed all the impressions of my youth. I was profoundly affected, such is the power of early associations and habit; and I considered, if such was the case with me, what must be the effect of such recollections upon the more simple and credulous vulgar?”*

The result is the same in any other case, whenever there is a resemblance between what we now experience, and what we have previously experienced. We have been acquainted, for instance, at some former period with a person, whose features appeared to us to possess some peculiarity, a breadth and openness of the forehead, an uncommon expression of the eye, or some other striking mark;—to-day we meet a stranger in the crowd, by which we are surrounded, whose features are of a somewhat

*Scott's Life of Napoleon, vol. III. ch. XXXIV.

similar cast, and the resemblance at once vividly suggests the likeness of our old acquaintance.

§. 110. *Resemblance in every particular not necessary.*

It is not necessary, that the RESEMBLANCE should be complete in every particular, in order to its being a principle or law of association. It so happens, (to use an illustration of Brown,*) that we see a painted portrait of a female countenance, which is adorned with a ruff of a peculiar breadth and display ; and we are, in consequence, immediately reminded of queen Elizabeth. Not because there is any resemblance between the features before us and those of the English sovereign, but because in all the painted representations, which we have seen of her, she is uniformly set off with this peculiarity of dress, with a ruff like that, which we now see. Here the resemblance between the suggesting thing and that, which is suggested, is not a complete resemblance, does not exist in all the particulars, in which they may be compared together, but is limited to a part of the dress.

That a single resembling circumstance, (and perhaps one of no great importance,) should so readily suggest the complete conception of another object or scene, which is made up of a great variety of parts, seems to admit of some explanation in this way. We take, for example, an individual ;—the idea, which we form of the individual is a complex one, made up of the forehead, eyes, lips, hair, general figure, dress, &c. These separate, subordinate ideas, when combined together and viewed as a whole, have a near analogy to any of our ideas, which are compounded, and are capable of being resolved into elements more simple. When, therefore, we witness a ruff of a size and decoration more than ordinary, we are at once reminded of that ornament in the habiliments of the British queen ; and this on the ground of resemblance.—But this article in the decorations of her person is the foundation of only one part of a very complex state of mind, which embraces the features and the general appearance. As there has been a long continued co-exist-

*Brown's Philosophy of the Human Mind, Lect. xxxv.

ence of those separate parts, which make up this complex state, the recurrence to the mind of one part or of one idea is necessarily attended with the recurrence of all the others. They sustain the relation of near friends; they form a group, and do not easily and willingly admit of a separation. The principle, which maintains in the relation of co-existence such states of the mind, as may be considered as grouped together, is the same with that, which so steadily and permanently combines the parts of what Mr. Locke calls mixed modes or other complex ideas, and is no less effectual in its operation.

§. 111. *Of resemblance in the effects produced.*

Resemblance operates, as an associating principle, not only when there is a likeness or similarity in the things themselves, but also when there is a resemblance in the effects, which are produced upon the mind.

The ocean, when greatly agitated by the winds, and threatening every moment to overwhelm us, produces in the mind an emotion, similar to that, which is caused by the presence of an angry man, who is able to do us harm. And in consequence of this similarity in the effects produced, they reciprocally bring each other to our recollection.

Dark woods, hanging over the brow of a mountain, cause in us a feeling of awe and wonder, like that, which we feel, when we behold, approaching us, some aged person, whose form is venerable for his years, and whose name is renowned for wisdom and justice. It is in reference to this view of the principle, on which we are remarking, that the following comparison is introduced in Akenside's *Pleasures of the Imagination*.

——— "Mark the sable woods,
 "That shade sublime yon mountain's nodding brow;
 "With what religious awe the solemn scene
 "Commands your steps! As if the reverend form
 "Of Minus or of Numa should forsake
 "The Elysian seats, and down the embowering glade
 "Move to your pausing eye."

As we are so constituted, that all nature produces in

us certain effects, causes certain emotions, similar to those, which are caused in us in our intercourse with our fellow-beings, it so happens that, in virtue of this fact, the natural world becomes living, animated, operative. The ocean is in anger; the sky smiles; the cliff frowns; the aged woods are venerable; the earth and its productions are no longer a dead mass, but have an existence, a soul, an agency.

We see here the foundation of metaphorical language; and it is here, that we are to look for the principles, by which we are to determine the propriety or impropriety of its use.

In every metaphor there is some analogy or resemblance; it is a comparison or simile in its most concise form. There is an examination instituted; and circumstances of similitude are detected; not, however, by a long and laborious process, but in a single word. Hence it is the language of strong emotion; and as such, is peculiarly the language of uncivilized nations, and, in general, of the most spirited parts of the poetry of those, that are civilized.

§. 112. *Contrast the second general or primary law.*

CONTRAST is another law or principle, by which our successive mental states are suggested; or, in other terms, when there are two objects, or events, or situations of a character precisely opposite, the idea or conception of one is immediately followed by that of the other. When the discourse is of the *palace* of the king, how often are we reminded, in the same breath, of the *cottage* of the peasant! And thus wealth and poverty, the cradle and the grave, hope and despair, are found in public speeches and in declamations from the pulpit almost always going together and keeping each other company. The truth is, they are connected together in our thoughts by a distinct and operative principle; they accompany each other, not because there is any resemblance in the things thus associated, but in consequence of their very marked contrariety. Darkness reminds of light, heat of cold, friendship of en-

mity ; the sight of the conqueror is associated with the memory of the conquered, and when beholding men of deformed and dwarfish appearance, we are at once led to think of those of erect figure or of Patagonian size. Contrast, then, is no less a principle or law of association, than resemblance itself.

Those writers, who succeed in giving a natural delineation of human action and suffering, furnish illustrations of the operation of this principle. In one of those interesting sketches, which acquaint us with the wants, captivities, and sufferings of the early settlers of this country, there is the following instance of association by contrast.—
 “As I lifted the unsavoury morsel, says the afflicted subject of the Narrative, with a trembling hand to my mouth, I cast my thoughts back a few days to a time, when from a board plentifully spread in my own house, I ate my food with a merry heart. The wooden spoon dropped from my feeble grasp. The contrast was too affecting.”*

Scott remarks of certain unhappy Italians, who were among the victims of Napoleon's dreadful retreat from Russia, being overcome by extreme fatigue, exposure, and the severity of the cold, that their thoughts, when perishing so miserably, must have been on their own mild climate and delicious country.

Count Lemaistre's touching story, entitled, from the scene of its incidents, *THE LEPER OF AOST*, illustrates the effects of the principle of association now under consideration. Like all persons, infected with the leprosy, the subject of the disease is represented as an object of dread no less than of pity to others, and while he is an outcast from the society of men, he is a loathsome spectacle even to himself. But what is the condition of his mind? What are the subjects of his thoughts? The tendencies of his intellectual nature prevent his thinking of wretchedness alone. His extreme misery aggravates itself by suggesting scenes of ideal happiness, and his mind revels in a paradise of delights, merely to give greater intensity to his actual woes by contrasting them with imaginary bliss.

* Narrative of the Captivity, &c. of Mrs. Johnson.

—“I represent to myself continually (says the Leper) societies of sincere and virtuous friends ; families, blessed with health, fortune, and harmony. I imagine, I see them walk in groves, greener and fresher, than these, the shade of which makes my poor happiness ; brightened by a sun more brilliant than that, which sheds its beams on me ;—And their destiny seems to me as much more worthy of envy in proportion as my own is the more miserable.”

§. 113. *This law of association the foundation of antithesis.*

Although in what we have to say at present on association, it is our design to attend merely to its general nature and laws, without following out the subject into its particular applications, we may be allowed here to depart so far from this intention, as briefly to remark on the rhetorical figure of Antithesis, which is the placing in a discourse of two objects or ideas in opposition. The fact, that writers of acknowledged taste and discernment not unfrequently employ this figure, might lead us to suppose, (which is the truth,) that it has its foundation in the human mind, viz. in the principle of association to which we give the name of contrast. In one of the tragedies of Southern we find the following antithetic expressions.

—————“ Could I forget
 “ What I have been, I might the better bear
 “ What I am destined to. I am not the first,
 “ That have been wretched ;—But to think how much
 “ I have been happier.—————

Here the present is placed in opposition with the past, and happiness is contrasted with misery ; not by a cold and strained artifice, but by the natural impulses of the mind, which is led to associate together things, that are the reverse of each other. I say not by a cold artifice but naturally ;—for what man ever was there, or can be, that has been cast down from the heights of fortune, whether

it have happened with his guilt or his innocence, and does not most readily and unavoidably look back from his present depressed condition to his former prosperities?

The often repeated eulogium of Mr. Burke on the philanthropic Howard is a fine instance of this figure, and shows to what good purpose it may be applied on suitable occasions by persons of genius.—“He has visited all Europe,—not to survey the sumptuousness of palaces, or the stateliness of temples; not to make accurate measurements of the remains of ancient grandeur, not to form a scale of the curiosity of modern arts, nor to collect medals or collate manuscripts;—but to dive into the depths of dungeons; to plunge into the infection of hospitals; to survey the mansions of sorrow and pain; to take the gauge and dimensions of misery, depression, and contempt, to remember the forgotten, to attend to the neglected, to visit the forsaken, and compare and collate the distresses of all men in all countries.”—This figure of rhetoric, therefore, being founded in our mental constitution, is sometimes employed with success, but whenever there is such frequency in the use of it, as to betray artifice rather than natural emotion, it loses its effect, and becomes a vice rather than an excellence in style.

§. 114. *Contiguity the third general or primary law.*

Those thoughts and feelings, which have been connected together by nearness of time and place, are readily suggested by each other; and, consequently, contiguity in those respects is rightly reckoned, as another and third primary law of our mental associations. When we think of Palestine, for instance, we very readily and naturally think of the Jewish nation, of the patriarchs, of the prophets, of the Saviour, and of the apostles, because Palestine was their place of residence, and the theatre of their actions. So that this is evidently an instance, where the suggestions are chiefly regulated by proximity of place. When a variety of acts and events have happened nearly at the same period, whether in the same place or not, one is not thought of without the other being closely associa-

ted with it, owing to proximity of time. If, therefore, the particular event of the crucifixion of the Saviour be mentioned, we are necessarily led to think of various other events, which occurred about the same period, such as the treacherous conspiracy of Judas, the denial of Peter, the conduct of the Roman soldiery, the rending of the veil of the temple, and the temporary obscuration of the sun.

The mention of Egypt suggests the Nile, the Pyramids, Cæsar, Cleopatra, the battle of Aboukir. The naming of the AMERICAN REVOLUTION immediately fills the mind with recollections of Washington, Greene, and many of their associates, whose fortune it was to enlist their exertions in behalf of freedom in the same country and at the same period.

The following passage from captain King's continuation of Cook's last voyage furnishes a remarkable example of the operations of this principle;—"While we were at dinner in this miserable hut, on the banks of the river, Awatska, and the guests of a people, with whose existence we had before been scarce acquainted, and at the extremity of the habitable globe, a solitary, half-worn, pewter spoon, whose shape was familiar to us, attracted our attention; and, on examination, we found it stamped on the back with the word, LONDON. I cannot pass over this circumstance in silence out of gratitude for the many pleasant thoughts, the anxious hopes, and tender remembrances it excited in us. Those, who have experienced the effects, that long absence, and extreme distance from their native country produce in the mind, will readily conceive the pleasure such a trifling incident can give." The beauty of this illustration consists not so much in the city or place having been suggested in consequence of their seeing its name impressed on the pewter spoon, although this may be supposed to have happened on the principle of contiguity, as in the circumstance, that such a multitude of other pleasing recollections thronged around the memory of that place. When they thought of London, they thought of their homes; they thought of the in-

mates of those homes ; they thought of a thousand incidents which they had there witnessed ; a striking illustration of the degree of importance, which may be accumulated on the most trivial circumstance, when that circumstance can be made to connect itself effectually with any general principles of our mental constitution.

That, which we have set down, as the third primary law of mental association, is more extensive in its influence than any others. It has been remarked with truth, that proximity in time and place forms the whole calendar of the great mass of mankind. They pay but little attention to the arbitrary eras of chronology ; but date events by each other, and speak of what happened at the time of some dark day, some great eclipse, some war or revolution, or when one neighbour built a house, or another's was destroyed. The practice of associating a considerable number of facts with some place, or with some event too prominent and wonderful to be easily forgotten, is the great and almost the only instrument, which the mass of people employ in retaining the multitude of particulars of a personal or local nature.

§. 115. *Cause and effect the fourth primary law.*

There are certain facts or events, which hold to each other the relation of invariable antecedence and sequence. That fact or event, to which some other one sustains the relation of constant antecedence, is in general called an *effect*;—And that fact or event, to which some other one holds the relation of invariable sequence, has in general the name of a *cause*. Now there may be no resemblance in the things, which reciprocally bear this relation, there may be no contrariety, and it is by no means necessary, that there should be contiguity in time or place, as the meaning of the term, contiguity, is commonly understood. There may be CAUSE and EFFECT without any one or all of these circumstances. But it is a fact, which is known to every one's experience, that when we think of the cause in any particular instance, we naturally think of the effect, and, on the contrary, the knowledge or recollection

of the effect brings to mind the cause ;—And in view of this well known and general experience, there is good reason for reckoning CAUSE and EFFECT among the primary principles of our mental associations. What we here understand by principles or laws will be recollected viz. The general designation of those circumstances, under which the regular consecution of mental states occurs.

It is on the principle of cause and effect, that when we see a surgical instrument or any engine of torture, we have an idea of the pain, which they are fitted to occasion, and for a moment are tempted to imagine, that we ourselves are partially the subjects of it. The sight of a wound, inflicted however long before, suggests to us the instrument, by which it was made. When we witness any of our fellow beings in distress, we naturally think of the particular cause of it, if we know what it is ; and if we are ignorant, we make it a subject of inquiry. When we have good news to communicate, we please ourselves with the thought of the joy, which it will occasion, and the bearer of afflictive tidings cannot but anticipate the grief, which the annunciation of them will produce.

CHAPTER TENTH.

LAWS OF ASSOCIATION. (II) SECONDARY LAWS.

§. 116. *Of secondary laws and their connection with the primary.*

THE subject of Association is not exhausted in the enumeration and explanation of its Laws, which has thus far been given. Besides the PRIMARY LAWS, which have fallen under our consideration, there are certain marked and prominent circumstances, which are found to exert, in a greater or less degree, a modifying and controlling influence over the more general principles. As this influence is of a permanent character, and not merely accidental and temporary, the grounds or sources of it are called, by way of distinction, SECONDARY LAWS.

These, which we are now to consider, will probably appear at first sight to be more numerous than they are in fact. It is undoubtedly somewhat difficult to make out a just and unalterable designation of them. Nevertheless it is believed, that, on a careful examination, their multiplicity will be lessened, and that they will be found to be but four in number; viz, lapse of time, degree of coexistent feeling, repetition or habit, and original or constitutional difference in character.

It must at once be obvious, that these principles, although holding a subordinate rank, give an increased range and power to the PRIMARY laws. It is not to be in-

ferred from the epithet, by which they are distinguished, that they are, therefore, of a very minor, and inconsiderable importance. On the contrary, human nature without them, as far as we are capable of judging, would have assumed a sort of fixed and inflexible form, instead of presenting those pleasing, and almost endless diversities it now does.—The primary laws are the great national roads, along which the mind holds its course; the secondary are those cross roads, that intersect them from time to time, and thus afford an entrance into, and a communication with the surrounding country; and yet all have a connection with each other; and with all their turnings and intersections, concur at last in the ultimate destination.

§. 117. *Of the influence of lapse of time.*

The first of the four secondary laws, which we shall consider, is LAPSE OF TIME. Stated more particularly the law is this; Our trains of thought and emotion are more or less strongly connected and likely to be restored, according as the lapse of time has been greater or less.

Perhaps no lapse of time, however great, will utterly break the chain of human thought, and cause an entire inability of restoring our former experiences; but it appears evident from observation, as far so as observation renders evident in almost any case, that every additional moment of intervening time weakens, if it do not break and sunder the bond, that connects the present with the past, and diminishes the probability of such a restoration. We remember many incidents, even of a trifling nature, which occurred to-day, or the present week, while those of yesterday or of last week are forgotten. But if the increased period of months and years throws itself between the present time and the date of our past experiences, our ancient joys, regrets, and sufferings, then how unfrequent is their recurrence, and how weak and shadowy they appear! Increase the lapse of time a little further, and a dark cloud rests on that portion of our history; less

substantial than a dream, it utterly eludes our search, and becomes to us as if it had never been.

There is, however, an apparent exception to this law, which should be mentioned. The associated feelings of old men, which were formed in their youth and the early part of manhood, are more readily revived than those of later origin.—On this state of things in old men, two remarks are to be made.

The first is, that the law under consideration fully, and unfailingly maintains itself in the case of aged persons, whenever the time is not extended far back. Events, which happened but a few hours before, are remembered, while there is an utter forgetfulness of those, which happened a few weeks or even days before. So far as this, the law operates in old men precisely as in others. The second remark is, that the failure of its operation in respect to the events of youth is caused not by an actual inability in the secondary law before us, to blot out and diminish here as in other cases, but by the greater power of the combined action of two other laws, viz. Co-existent feeling, and Repetition or habit. Our early life, as a general statement, was the most deeply interesting, and is the most frequently recurred to ; and in this way its recollections become so incorporated with the mind as to hold a sort of precedence over our more recent experiences, and thrust them from their proper place.

§. 118. *Secondary law of repetition or habit.*

Another secondary law is REPETITION ; in other words, successions of thought are the more readily suggested in proportion as they are the more frequently renewed. If we experience a feeling once, and only once, we find it difficult to recall it after it has gone from us, but repeated experience increases the probability of its recurring. Every schoolboy, who is required to commit to memory, puts this law to the test, and proves it. Having read a sentence a number of times, he finds himself able to repeat it out of book, which he could not do with merely reading it once.

The operation of this law is seen constantly in particular arts and professions. If men be especially trained up to certain trades, arts, or sciences, their associations on those particular subjects and on every thing connected with them, are found to be prompt and decisive. We can but seldom detect any hesitancy or mistake within the circle, where their minds have been accustomed to operate, because every thought and process have been recalled and repeated thousands of times. With almost every thing they see or hear there is a train of reflection, connecting it with their peculiar calling, and bringing it within the beaten and consecrated circle. They seem unable to free themselves from an influence, which has grown with their growth, and strengthened with their strength. Every hour, unless they guard against it, hastens the process, which threatens to cut them off, and insulate them from the great interests of humanity, and to make them wholly professional.

It is proper to add, that the result of repetition, which is indicated here, is not limited to association. This is only one of the numerous applications of the great LAW OF HABIT, which will soon be separately considered.

§. 119. *Of the secondary law of co-existent emotion.*

A third secondary law is CO-EXISTENT EMOTION.—It may be stated in other words as follows; The probability, that our mental states will be recalled by the general laws will in part depend on the depth of feeling, the degree of interest, which accompanied the original experience of them.

Why are bright objects more readily recalled than faint or obscure? It is not merely because they occupied more distinctly our perception, but because they more engaged our attention and interested us, the natural consequence of that greater distinctness. Why do those events in our personal history, which were accompanied with great joys and sorrows, stand out like pyramids in our past life, distinct to the eye, and immoveable in their position, while others have been swept away, and cannot be

found? Merely because there were joy and sorrow in the one case, and not at all, or only in a slight degree, in the other ; because the sentient part of our nature combined itself with the intellectual ; the heart gave activity and vigour to the understanding.

We learn from a revered and ancient Book, that the Jews could not forget Jerusalem, the Holy City, the gates of Zion, that they loved so well. And why not ? How did it happen, that in their Captivity they sat down by the rivers of Babylon, wept when they remembered Zion, and hung their harps on the willows? It was, because the features of Jerusalem were not mere outlines, addressed to the cold, unquickened perception ; but every lineament was wreathed with love ; every gate and street and dwelling-place and temple waxed bright and beautiful in the midst of pure and pleasant recollections ; the Holy City was not a mere abstraction of the head ; its image was pictured and written on the heart.

§. 120. *Original difference in the mental constitution.*

The fourth and last secondary law of association is ORIGINAL DIFFERENCE IN THE MENTAL CONSTITUTION.— This Law, it will be noticed, is expressed in the most general terms ; and is to be considered, therefore, as applicable both to the intellectual and the sentient part of man. It requires accordingly to be contemplated in two distinct points of view.

The law under consideration holds good, in the first place, in respect to original differences of emotion or feeling, or, as it is more commonly expressed, of disposition. It will help to make us understood, if we allude briefly, in this part of the subject, to two different classes of persons. One of the descriptions of men, which we have now in view, is composed of those, for such are undoubtedly to be found, who are of a pensive and melancholy turn. From their earliest life they have shown a fondness for seclusion, in order that they might either commune with the secrets of their own hearts, or hold intercourse, undisturbed by others, with whatever of impressiveness and

sublimity is to be found in the works of nature. The other class are naturally of a lively and cheerful temperament. If they delight in nature, it is not in solitude, but in the company of others. While they seldom throw open their hearts for the admission of troubled thoughts, they oppose no obstacle to the entrance of the sweet beams of peace and joy and hope.

Now it is beyond question that the primary laws of association are influenced by the constitutional tendencies; manifest in these two classes of persons; that is to say, in the minds of two individuals, the one of a cheerful, the other of a melancholy or gloomy disposition, the trains of thought will be very different. This difference is finely illustrated in those beautiful poems of Milton, *L'ALLEGRO* and *IL PENSEROSO*. *L'ALLEGRO* or the cheerful man finds pleasure and cheerfulness in every object, which he beholds;—The great sun puts on his amber light, the mower whets his scythe, the milk-maid sings,

“ And every shepherd tells his tale

“ Under the hawthorn in the dale.

But the man of a melancholy disposition, *IL PENSEROSO*, chooses the evening for his walk, as most suitable to the temper of his mind; he listens from some lonely hillock to the distant curfew, and loves to hear the song of that “ sweet bird,

—That shun'st the noise of folly,

“ Most musical, most melancholy.

Further;—Our trains of suggested thoughts will be modified by those temporary feelings, which may be regarded, as exceptions to the more general character of our dispositions. The cheerful man is not always cheerful, nor is the melancholy man at all times equally sober and contemplative. They are known to exchange characters for short periods, sometimes in consequence of good or ill health, or of happy or adverse fortune, and sometimes for causes, which cannot be easily explained. So that our mental states will be found to follow each other, with a succession, varying not only with the general character of

our temper and dispositions, but with the transitory emotions of the day or hour.

§. 121. *The foregoing law as applicable to the intellect.*

The law of original difference in the mental constitution is applicable, in the second place, to the intellect, properly and distinctively so called ; in other words to the comparing, judging, and reasoning part of the soul. There is a difference in men in this respect, as well as in their feelings and dispositions, although it is perceptible in different degrees, and in some cases hardly perceptible at all. One person, for instance, has from childhood exhibited a remarkable command of the relations and combinations of numbers ; another exhibits in like manner an uncommon perception of uses, adaptations, and powers, as they are brought together, and set to work in the mechanic arts ; another has the power of generalizing in an uncommon degree, and having obtained possession of a principle in a particular case, which may appear to others perfectly and irretrievably insulated, he at once extends it to hundreds, and thousands of other cases.

It is perhaps unnecessary to delay here, for the purpose of confirming what has now been said, by a reference to the history of individuals. A slight acquaintance with literary history will show, that diversities of intellect, such as have been alluded to, have been frequent. Such diversities are undoubtedly to be considered as implied in all instances of genius. When we are told, that one man has a genius for mathematics, another for poetry, that the genius of one lays in politics, and of another in the mechanic arts, we naturally inquire, What genius is ? Nor are we able to learn, that it is any thing more than the constitutional difference we have been considering, combined perhaps with a strong curiosity ; in other words, it is essentially and chiefly a natural tendency and quickness in forming associations on the principles of resemblance, of contrast, and of cause and effect. The history of the human mind does not authorize us to expect of men, whose associations are originally and prevailingly

formed on the law of mere contiguity in time and place, which seems to be the case with a great portion of mankind: that they will add new beauties to literature or new truths to science. How often had the husbandman seen the apple fall to the ground without even asking for the cause? But when Newton saw the fall of an apple, he not only asked for the cause, but having conjectured it, he once applied it to every thing in like circumstances around him, to all the descending bodies on the earth's surface. Here was a mind, not merely great by toil, but constitutionally great and inventive. How much more so then, when he lifted up the principle of gravitation from the surface of the earth to the stars of heaven, and showed its universality, and proved, that the furthest and mightiest planet was a brother to the smallest particle of dust beneath his feet.*

All the laws of association may properly be given here in a condensed view. The PRIMARY or general laws are RESEMBLANCE, CONTRAST, CONTIGUITY in time and place, and CAUSE and EFFECT. Those circumstances, which are found particularly to modify and control the action of these, are termed SECONDARY laws, and are as follows, Lapse of time, Repetition or habit, Co-existent feeling, and Constitutional difference in mental character.

* Genius discovers itself in various ways. In the abstract sciences, and in arts, involving scientific principles, it makes itself known by inventions and discoveries. But there is a difference between the two. Mr. Stewart, in remarking, (ELEMENTS, VOL. I., CH. V,) on invention in the arts and sciences, thus states and illustrates the distinction.

"Before we proceed, it may be proper to take notice of the distinction between Invention and Discovery. The object of the former, as has been frequently remarked, is to produce something which had no existence before; that of the latter, to bring to light something which did exist, but which was concealed from common observation. Thus we say, Otto Guericke invented the air-pump; Sanctorius invented the thermometer; Newton and Gregory invented the reflecting telescope; Galileo discovered the solar spots, and Harvey discovered the circulation of the blood. It appears, therefore, that improvements in the Arts are properly called *inventions*;

§. 122. *Of associations suggested by present objects of perception.*

There remains another point of view, in which it seems proper, that the subject of association should be contemplated, before we leave it.—Associated thoughts and emotions, when made to pass through the mind by some sound, which the ear has caught, by some object, which has met the eye, or any present object of perception whatever, are peculiarly vivid and strong. Associations, which do not admit any of our present perceptions as a part of the associated train, cannot but impress us, as being in some measure airy and unsubstantial, however distinct. We deeply feel, that they are part of the experiences of departed days, and which, in departing from us, have become almost, as if they had never been. But let them partake of our present experience, of what we now feel and know to exist, and they seem to gain new strength ; the remembrances are not only distinct, but what was airy and unsubstantial fades away, and they have life, and power, and form.

How often, in the wanderings of life, are we led by

and that facts, brought to light by means of observation, are properly called *discoveries*.

Agreeable to this analogy is the use, which we make of these words, when we apply them to subjects purely intellectual. As truth is eternal and immutable, and has no dependence on our belief or disbelief of it, a person, who brings to light a truth formerly unknown, is said to make a discovery. A person on the other hand, who contrives a new method of discovering truth, is called an inventor. Pythagoras, we say, discovered the forty-seventh proposition of Euclid's first book; Newton discovered the binomial theorem; but he invented the method of prime and ultimate ratios; and he invented the method of fluxions.

In general, every advancement in knowledge is considered as a discovery; every contrivance, by which we produce an effect, or accomplish an end, is considered an invention. Discoveries in science, therefore, unless they are made by accident, imply the exercise of invention ; and, accordingly, the word *invention* is commonly used to express originality of genius in the sciences, as well as in the arts."

some apparently accidental train of thought to the recollection of the residence of our early years and of the incidents, which then occurred! The associations are interesting, but we find it difficult to make them permanent, and they are comparatively faint. But let there be connected with the train of thought the present sound of some musical instrument, which we then used to hear, and of our favorite tune, and it will be found, that the reality of the tune blends itself with the airy conceptions of the mind, and, while we kindle with an illusive rapture, the whole seems to be real. Some illustrations may tend to make these statements more clear, and to confirm them.

It is related in one of the published Lectures of Dr. Rush, that an old native African was permitted by his master, a number of years since, to go from home in order to see a lion, that was conducted as a show through the state of New Jersey. He no sooner saw him, than he was so transported with joy, as to express his emotions by jumping, dancing, and loud acclamations, notwithstanding the torpid habits of mind and body, superinduced by half a century of slavery. He had known that animal, when a boy in his native country, and the sight of him suddenly revived the memory of his early enjoyments, his native land, his home, his associates, and his freedom.

There is in the same writer another interesting instance of the power of association, in which he himself had a part, and which will be given in his own words.—“During the time I passed at a country-school, in Cecil County, in Maryland, I often went on a holiday, with my schoolmates, to see an eagle’s nest, upon the summit of a dead tree in the neighbourhood of the school, during the time of the incubation of that bird. The daughter of the farmer, in whose field this tree stood, and with whom I became acquainted, married, and settled in this city about forty years ago. In our occasional interviews, we now and then spoke of the innocent haunts and rural pleasures of our youth, and, among other things, of the ea-

gle's nest in her father's field. A few years ago, I was called to visit this woman when she was in the lowest stage of a typhus fever. Upon entering her room, I caught her eye, and, with a cheerful tone of voice, said only, 'The eagle's nest.' She seized my hand, without being able to speak, and discovered strong emotions of pleasure in her countenance, probably from a sudden association of all her early domestic connections and enjoyment with the words I had uttered.* From that time she began to recover. She is now living, and seldom fails, when we meet, to salute me with the echo of the 'eagle's nest.' "

§. 123. *Causes of increased vividness in the foregoing instances.*

From such illustrations it would seem to be sufficiently clear, that, whenever associated thoughts and emotions are connected with any present perceptions, they are peculiarly strong and vivid. They steal into all the secret chambers of the soul, and seemingly by some magic power impart a deep intensity to its feelings, and give to the fleeting world of memory the stability of real existence. There are two causes, why such associated feelings should possess more than ordinary strength and vividness.

(1) The particular train of thought and feeling, which is excited in the mind, continues longer than in other cases, in consequence of the greater permanency and fixedness of the present objects of perception, which either suggested the train, or make a part of it. So long as the lion was permitted to remain in the sight of the aged African, so long without interruption was the series of delightful thoughts kept up within him. The bright images, which threw him into such raptures, and awoke stupidity itself, were not fleeting away with every breath, but remained permanent.

The sick lady of Philadelphia saw the physician, with whom she had been acquainted in the early part of life. By the mention of the eagle's nest, he vividly recalled the

* Rush's Introductory Lectures, xi.

scenes of those young days. But it was the presence of the person, whose observation had given rise to the train of association, which contributed chiefly to keep it so long in her thoughts. Had it occurred merely from some accidental direction of her own mind, without any present object, which had made a part of it, no doubt her sufferings or other circumstances would soon have banished it.

(2) The second cause of the increased vividness of associations, suggested by a present object of perception or combined with it, is this, viz. The reality of the thing perceived is communicated in the illusions of the moment to the thing suggested.—The trees of the desert were the hiding place of the lion, when the African saw him in early life; and now, after the lapse of so many years, he imagines, that, in the quickened eye of his mind, he beholds the forests of his native soil, because he has before him the proud and powerful animal, that crouched under their shade. And the presence of the monarch of the forest gives a reality not only to woods and deserts; but by a communication of that, which exists to that, which is merely suggested, the whole group of his early experiences of whatever kind, so far as they are recalled, virtually acquire a like truth and reality.

These remarks may be properly applied to explain a recent strong manifestation of feeling in a whole people. The citizens of the United States have a multitude of patriotic associations, connected with their revolutionary war. But those associations, owing to length of time, were by degrees growing dim on the minds of the aged, and made a still more diminished impression on those of the young. In the years eighteen hundred twenty four and five, La Fayette, the only surviving revolutionary officer of the grade of major-general, came from France on a visit to this country to see once more the people, for whom he had fought in his youth. All classes flocked to behold him, and to grasp his hand. Nothing could exceed the deep feeling, which existed from one part of the republic to the other. But it was not the individual

merely, however strongly the people were attached to him, that awoke such a happy and lofty enthusiasm. All the events and all the characters of the revolution exist to the present generation in associated states of the mind, and, as La Fayette had long formed a part in those ideal associations, when we were so fortunate, as to see him with our own eyes and touch him with our own hands, the Revolution then seemed in a new sense to be real, and all its scenes were embodied before us. All his associates in suffering and danger, all the renowned names that once fought by his side, were concentrated in himself. The reality of the living seemed to spread itself into the shadowy images of the dead; and thus the presence of this distinguished individual created not only a virtual re-existence, but a virtual presence for those revolutionary worthies, who are destined to maintain a cherished and permanent resting-place in the hearts of American citizens. It is in this deep and fond illusion, that we are, in part at least, to seek for the cause of the overwhelming emotion, which was exhibited.

In all the cases, which have been mentioned, the associated feelings were intensely powerful; a multitude of other instances, occurring indeed every day, illustrate the same idea, that they are strong and vivid in an unusual degree, when suggested by, or combined with a present object of perception. The two circumstances, which have been mentioned, seem to be the most obvious and satisfactory reasons, which can be given in explanation of the fact.

§. 124. *Historical remarks on the doctrine of association.*

Although the tendency of one idea or state of the mind to suggest another must have ever been so obvious as to be generally observed, it required something more than the ordinary powers of discernment and classification, to hit upon those general principles, by which the associations are regulated. Aristotle, in treating of memory, speaks of these principles or laws in part, and is the first, who is known to have laid down any general rules. He says,

that the relations, by which we are led in seeking after or tracing out those thoughts, which do not at once occur, are chiefly three ; RESEMBLANCE, CONTRAST, and CONTIGUITY.

There is an interesting passage in Cicero on the influence of association in the fifth book *DE FINIBUS*. His remarks illustrate particularly the results of the principle of contiguity. They also strikingly confirm the fact in the doctrine of association, that suggested trains of thought will be more vivid, when they are in some way connected with present objects of perception.

Mr. Locke in his *Essay on the Human Understanding* added a chapter in the fourth edition on the subject of association. This chapter, although it must be confessed to be a very imperfect one, compared with what has since been written on the subject, is mentioned with commendation by Dugald Stewart,* and he thinks, it has contributed as much as any thing else in Locke's writings to the subsequent progress of the philosophy of the mind. The first edition of the *Essay on the Human Understanding* was published in 1690.

Ernesti, in his *INITIA DOCTRINAE SOLIDIORIS*, published in 1734, enters into the subject somewhat particularly. He begins with stating the fact of the existence of association, or that the states of the mind are in some way connected together. He then proceeds to give the general law, by which this connection or consecution of states happens, as follows ;—Any thought or image in the mind has the power of suggesting the idea of some absent object. It may suggest one, that is in some respects similar to itself,—or one, of which the present is a part,—or one, which has been present together with it on some former occasion.

Mr. Hume gave much attention to this subject. In an *Essay on the association of ideas*, he uses the following expressions.—“ Though it be too obvious to escape obser-

* Historical Dissertation, Pt. II, §. I.,—Review of the Philosophical works of Locke and Leibnitz.

vation, that different ideas are connected together, I do not find, that any philosopher has attempted to enumerate or class all the principles of association ; a subject, however, that seems worthy of curiosity. To me there appear to be only three principles of connection among ideas, viz. RESEMBLANCE, CONTIGUITY in time and place, and CAUSE and EFFECT."

It is clearly implied in this statement of Mr. Hume, that he was ignorant of the passage in Aristotle above referred to. It will also be seen that he differs from that view, which has been adopted in this work in respect to the primary laws of association, in excluding CONTRAST from the number of them. He considers contrast a mixture of resemblance and causation ; but such is the serious, if not insuperable difficulty, attending this proposed analysis, that it has very justly failed of a general approbation.*

* In the *Biographia Literaria* of Mr. Coleridge, at Chapter fifth, there is a statement, which it is somewhat difficult to reconcile with the above cited remarks of Hume. As the passage throws some light on the subject of this section, it is here inserted, as follows.—"In consulting the excellent commentary of St. Thomas Aquinas on the *Parva Naturalia* of Aristotle, I was struck at once with its close resemblance to Hume's essay on association. The main thoughts were the same in both, the order of the thoughts was the same, and even the illustrations differed only by Hume's occasional substitution of more modern examples. I mentioned the circumstance to several of my literary acquaintances, who admitted the closeness of the resemblance, and that it seemed too great to be explained by mere coincidence; but they thought it improbable that Hume should have held the pages of the angelic Doctor worth turning over. But some time after, Mr. Payne, of the King's news, showed Sir James Mackintosh some odd volumes of St. Thomas Aquinas, partly perhaps from having heard that Sir James (then Mr.) Mackintosh had in his lectures past a high encomium on this canonized philosopher, but chiefly from the fact, that the volumes had belonged to Mr. Hume, and had here and there marginal marks and notes of reference in his own hand writing. Among these volumes was that which contains the *Parva Naturalia*, in the old latin version, swathed and swaddled in the commentary afore mentioned."

The doctrine of association makes a considerable figure in the observations on Man of Dr. Hartley. This work was published in the beginning of 1749. Dr. Hartley does not content himself with giving the mere facts of our mental operations, which are always valuable, however difficult they may be in some cases to be explained; but undertakes also to point out the precise connection of the origin of those facts with certain previous states of the corporeal system. He supposes, that every impression on the senses, caused by an external object, is propagated from the external body to the brain by means of vibrations in the nervous system, or rather by means of the oscillating motion of vibratory particles or vibratiuncles in the nerves. He expressly compares the vibrations or the motions backwards and forwards to the oscillations of pendulums and the tremblings of the particles of sounding bodies. When the vibration antecedent to one idea is, in any degree whatever, coincident with the vibration of another idea, the recurrence of either of them will have the effect to cause the repetition of the other, and of course the repetition of the idea or mental state. In this way he has proposed to account, not only for the rise or origin of those ideas, which come into the mind from things external to us, but for the existence of the great law of association. But his speculations on these points, which do not so much concern the facts themselves as their causation or physical history, have been in general regarded, as bordering too much on hypothesis to be particularly deserving of attention.

Almost all recent writers on mental philosophy have entered more or less into the subject of association. This was to be expected from its acknowledged importance, whether we consider its practical applications, or its connection with the other mental laws and powers. The subject is particularly examined, among other writers of merit, by Dugald Stewart, and in the lectures of Dr. Brown.

CHAPTER ELEVENTH.

LAW OF HABIT.

§. 125. *General view of the law of habit and of its applications.*

THERE is another great law of the mind, distinct from those which have been mentioned, which requires in this connection a separate and particular consideration, that of Habit. This important law of our constitution may be stated in general terms as follows; *That the mental action acquires facility and strength from repetition or practice.* The fact, that the facility and the increase of strength, implied in HABIT, is owing to mere repetition, or what is more frequently termed practice, we learn, as we do other facts and principles in relation to the mind, from the observation of men around us, and from our own personal experience. And as it has hitherto been found impracticable to resolve it into any general fact or principle more elementary, it may justly be regarded as something ultimate and essential in our nature.

The term Habit, by the use of language, indicates the facility and strength, acquired in the way which has been mentioned, including both the result and the manner of it. As the law of habit has reference to the whole mind of man, the application of the term, which expresses it, is of course very extensive. We apply it to the dexterity of workmen in the different manual arts, to the rapidity of the accountant, to the coup d'œil or eye-glance of

the military engineer, to the tact and fluency of the extemporaneous speaker, and in other like instances.—We apply it also in cases, where the mere exercise of emotion and desire is concerned ; to the avaricious man's love of wealth, the ambitious man's passion for distinction, the wakeful suspicions of the jealous, and the confirmed and substantial benevolence of the philanthropist.

It is remarkable, that the law under consideration holds good in respect to the body, as well as the mind. In the mechanical arts, and in all cases, where there is a corporeal, as well as mental effort, the effect of practice will be found to extend to both. Not only the acts of the mind are quickened and strengthened, but all those muscles, which are at such times employed, become stronger and more obedient to the will. Indeed the submission of the muscular effort to the volition is oftentimes rendered so prompt by habit, that we are unable distinctly to recollect any exercise of volition, previous to the active or muscular exertion. It is habit, which causes that peculiarity of attitude and motion, so easily discoverable in most persons, termed their gait ; it is habit also, which has impressed on the muscles, immediately connected with the organs of speech, that fixed and precise form of action, which in different individuals gives rise, in part at least, to characteristic peculiarities of voice. The habit in the cases just mentioned is both bodily and mental, and has become so strong, that it is hardly possible to counteract it for any length of time.—But it will be necessary in the remainder of this chapter to limit our considerations chiefly to Habit, considered as a law of our mental nature.

§. 126. *Illustrations of the law of habit.*

There will be occasion in almost every part of this Work, to illustrate and confirm this law. We shall scarcely advance a step in any part of our inquiries, without being called upon to contemplate increased evidence of its extent and power. It seems proper, however, to introduce in this place some further instances in illustra-

tion of its existence and nature ; remarking at the same time, that we discuss the subject here only in part and imperfectly, as we should otherwise anticipate remarks, which will more suitably offer themselves on subsequent occasions.

If a person, for instance, make it a practice to recall words, which have a similar sound, this particular form of association will by degrees be so strengthened, that in the end it will be by no means difficult to secure the recurrence of such words. This is the true explanation of the power of rhyming. It is well known, that most persons, whether they possess poetical genius or not, may acquire this power, by continuing for a length of time their search after words of a like termination. But this case of increased facility of association answers to the alleged result of the law under consideration ; and is an instance, and at the same time an illustration, and proof of HABIT.

Again, if a public speaker have fixed in his mind certain permanent principles, which are to guide him in the division and subdivision of his discourse, he acquires by practise a readiness in respect to them, and immediately applies them to every subject of debate. By means of the habit, which he has formed, he is not only enabled to resolve a subject into suitable parts, but to pass without hesitation or danger of mistake from one part of it to another ; whereas a person, who has not formed this habit, is perpetually at a loss ; he advances and retreats, goes over the ground again and again, and involves himself in inextricable confusion.

But take an instance of a little different kind, which, however, not less clearly shows what results may be expected from practice.—“ I sometimes amuse myself, (says Dr. Priestley,) with playing on a flute, which I did not learn very early, so that I have a perfect remembrance, that I exerted an express voluntary power every time that I covered any particular hole with my finger. But though I am no great proficient on the instrument, there are some tunes which I now very often play without ever attending to my fingers, or explicitly to the tune. I have even

played in concert, and, as I was informed, perfectly in tune, when I have been so absent, that, except at the beginning, I did not recollect that I had been playing at all."

In this case it was necessary to establish an association between certain positions of the fingers and the emission of certain sounds, indicated by the musical notes. The union thus formed was at first both weak, and slow and lingering in its results. It gradually acquired strength and facility by repetition ; that is, a HABIT of association was formed.

But there may be not only a habit of association, such as is evident in the instances, which have been now mentioned ; the results of this law are found also in sensation and perception, in imagination and reasoning, and in other parts of our purely intellectual nature, as we shall be led to see in the progress of our inquiries.

§. 127. *Application of this law to feelings or emotions.*

The existence of the same great law of our nature may be detected also in the operations of the emotions and passions.—An unfavourable suspicion is indulged by one individual in respect to another; this suspicion, instead of being effectually examined and checked, is permitted to return ; it often arises, and is found to gain strength from the mere repetition, until it is converted, by the accession of strength it has received, into positive dislike, and sometimes into hatred.—The feeling of benevolence is subjected to the same general law. If this feeling be exposed to a continued system of repression, it becomes so broken down and weakened, that at last objects of suffering entirely cease to affect us. But on the contrary, if it be indulged, it will gain strength ; it will become more and more ready and effective in its operation.—The case of the philanthropic Howard may be regarded as a proof of this. The feeling of benevolence was undoubtedly strong, when he first set out on his great and noble employment of visiting prisons and prisoners. But the record of his life is believed to justify the assertion, that the feeling increased by repetition, that it grew brighter and bright-

er, more and more intense, until, like the fire of the Vestals, it burnt perpetually in his bosom.

It is happy for us, in the inquiries of mental philosophy, if we can confirm what inquisitive men have been able to discover in their closets by an insight into the mental history of common life ; by a reference to the experiences, habits, and prejudices of those, who make no pretensions to skill in books. Nor are confirmations of the principles of this science less valuable, when they are given by scholars, whose calling it is to write upon other subjects, but who at times let fall an incidental testimony in respect to them. Thus in a work of the first President Adams is the following passage, which confirms the views of this section ; “ The passions are all unlimited ; nature has left them so ; if they could be bounded, they would be extinct ; and there is no doubt they are of indispensable importance in the present system. They certainly increase too, by exercise, like the body ; the love of gold grows faster than the heap of acquisition ; the love of praise increases by every gratification, till it stings like an adder and bites like a serpent, till the man is miserable every moment he does not snuff the incense ; ambition strengthens at every advance, and at last takes possession of the whole soul so absolutely, that the man sees nothing in the world of importance to others, or himself, but in his object.”*

§. 128. *Objection to these views in respect to habit.*

It is proper to mention here, that an objection has been raised to these views ; not to the doctrine of habit in general, but to the alleged extent of it. While it is admitted that it exists, and produces its results in most cases, it is contended, that our passive feelings, as they are sometimes called, are not strengthened in this way. Passive feelings, as the term is used in this objection are those, where we suffer or endure. This seems to have been the

* Adams's Defence of the Constitution of the United States, Vol. I p. 129 — Philad. Ed.

CHAPTER TWELFTH.

SIMPLICITY AND COMPLEXNESS OF MENTAL STATES.

§. 131. *Origin of the distinction of mental states as simple and complex.*

BEFORE leaving the subject of those more general laws, by which the action of the mind is so essentially sustained and guided, there remains one topic further to be briefly examined ; it is the existence of our mental states as Simple and Complex.—This subject, which has been more than once already alluded to, and which will hereafter be frequently made the basis of remarks, holds a prominent place in the writings of Mr. Locke. He early introduces it into the Essay on the Understanding, and seems to recur to it with peculiar pleasure; frequently separating thought and feeling into their elementary parts, balancing one state of mind with another, and estimating their comparative value. It cannot, therefore, be passed by without some examination, and perhaps no opportunity will present itself more favorable on all accounts than the present. And in truth, if the views which are to be maintained on this subject be correct, it is no misapplication of language, although it may have the appearance of being an uncommon phraseology, to speak of the principle involved in them, as a law of our mental nature.

On entering into this subject, the first inquiry is, Whether the consideration of our mental states as simple

powerless and expired, and he had no more tears to shed.

It is not necessary to multiply instances ; the difficulty will probably now be understood ; the facts are in appearance precisely, or very nearly such as have been stated ; nevertheless they are susceptible of being satisfactorily accounted for, consistently with the great law, which has been laid down.

§. 129. Explanation of the above mentioned cases.

In explanation of the instances, mentioned in the preceding section, we would remark in the first place, that the law of Habit is not so strong as not to be overcome by others ; it may be weakened, subdued, apparently annulled, when coming in conflict with other strong principles ; and that is the fact in these cases. When the sailor was first exposed to the storm, it was but natural that the idea of danger should be prominent in his mind, and that his fears should be strong. After the repetition of similar situations, he finds, that the danger is less than he at first imagined ; and not only this, he finds, that in order to escape the danger whatever it is, he must discharge his duty ; he must make every effort ; he must put forth a cool judgment, which is inconsistent with the agitations of fear ; he must call into exercise other feelings. Every strong passion and energy of the soul, ambition, courage, and hope are summoned forward, to counteract and destroy the action of the law in question, and the effort is successful. This is the explanation.

And so in the case of the physician. He finds it absolutely necessary, that his sympathy and pity for the objects of suffering before him should be overruled and subdued. It is more necessary for them, than for himself. He must subdue pity, in order to show pity ; his mind must be perfectly calm and collected, which would be inconsistent with his dwelling much on the actual distress of the patient ; he must be able to observe and collate the symptoms of the disease, and to prepare the

remedy. His heart has not become truly and intrinsically harder than other men's; his judgment has gained an ascendancy over his heart, and checked its emotions; he has made it hard for particular occasions, and for sufficient reasons; but place him in other situations, where this necessity is not laid upon him, smite this seeming rock at other times, and the waters of sorrow will freely gush out.

§. 130. *Further illustrations of the above instances.*

In the cases, which have been mentioned and others like them, the persons concerned have formed, in some sense, an opposite habit; they have called into exercise, repeated, and strengthened emotions of a different kind; they have banked up, as it were, their fears and their sympathies lest they should overflow.

An explanation, similar to what has been already given, will apply universally; and among other cases, to that of the soldier. How often did the famous Emperor of the French look on the heaps of slain, on the lifeless piles of young men, the hope of their parents; of men of middle age, the support of their families; of veterans and renowned officers, without discovering a single emotion! The lamentations of millions arose around him; they were borne alike from cottages and palaces, from friends and foes, mingling on every breeze, but he heeded them not; he felt not, wept not. But Napoleon's heart was not naturally without kindly feeling; there is much reason to believe it was far otherwise; it was the supposed necessity of his situation, and his philosophy, which made it so. He had placed before him his own chosen object, and he had long and laboriously taught himself to care for nothing else; his hardness of heart was a matter of calculation and discipline; and possibly we may find a proof of it in what some will consider a trifling incident.

This same man once rode along one of his fields of battle, and amid the fearful desolation around him hap-

pened to fix his eye on a dog, that remained to watch, and to mourn over his lifeless master's body ; and he was affected, even agitated with emotion. And how was this ? He had hardened his heart against sympathy with human beings, and had not counted on a contest with his sympathy for dogs. Here he was unprepared ; there was a gap left in the Chinese wall, which he had built round his commiseration ; he could meet the howlings of widows, the grief of mothers, the lamentations of orphans, as the rock meets the dashing of the ocean, and remain unmoved ; but at the grief of a dog he was shaken, and his spirit was stirred within him.

CHAPTER TWELFTH.

SIMPLICITY AND COMPLEXNESS OF MENTAL STATES.

§. 131. *Origin of the distinction of mental states as simple and complex.*

BEFORE leaving the subject of those more general laws, by which the action of the mind is so essentially sustained and guided, there remains one topic further to be briefly examined ; it is the existence of our mental states as Simple and Complex.—This subject, which has been more than once already alluded to, and which will hereafter be frequently made the basis of remarks, holds a prominent place in the writings of Mr. Locke. He early introduces it into the *Essay on the Understanding*, and seems to recur to it with peculiar pleasure; frequently separating thought and feeling into their elementary parts, balancing one state of mind with another, and estimating their comparative value. It cannot, therefore, be passed by without some examination, and perhaps no opportunity will present itself more favorable on all accounts than the present. And in truth, if the views which are to be maintained on this subject be correct, it is no misapplication of language, although it may have the appearance of being an uncommon phraseology, to speak of the principle involved in them, as a law of our mental nature.

On entering into this subject, the first inquiry is, Whether the consideration of our mental states as simple

and complex is a just and proper one? And in reference to this inquiry, it is an obvious remark, that, in looking at our thoughts and feelings, as they continually pass under the review of our internal observation, we readily perceive, that they are not of equal worth; we do not assign to them the same estimate; one state of mind is found to be expressive of one thing only, and that thing, whatever it is, is precise, and definite, and inseparable; while another state of mind is found to be expressive of, and virtually equal to many others. And hence we are led, not only with the utmost propriety, but even by a sort of necessity, to make a division of the whole body of our mental affections into the two classes of **SIMPLE** and **COMPLEX**. Nature herself makes the division; it is one of those characteristics, which gives to the mind, in part at least, its greatness; one of those elements of power, without which the soul could not be what it is, and without a knowledge of which it is difficult to possess a full and correct understanding of it in other respects.

§. 132. *Of the general nature of simple mental states.*

We shall first offer some remarks on those mental states, which are simple, and shall aim to give an understanding of their nature, so far as can be expected on a subject, the clearness of which depends more on a reference to our own personal consciousness, than on the teachings of others.

Let it be noticed then, in the first place, that a simple idea **CANNOT BE SEPARATED INTO PARTS**.—It is clearly implied in the very distinction between simplicity and complexity, considered in relation to the states of the mind, that there can be no such separation, no such division. It is emphatically true of our simple ideas and emotions, whether the remark will hold good of any thing else or not, that they are one and indivisible. Whenever you can detect in them more than one element, they at once lose their character of simplicity and become complex, however they may have previously appeared. Inseparableness consequently is their striking characteristic; and

it may be added, that they are not only inseparable in themselves, but are separate from every thing else. There is nothing, which can stand as a substitute for them where they are, or represent them where they are not; they are independent unities, constituted exclusively by the mind itself, having a specific and positive character, but nevertheless known only in themselves.

§. 133. *Simple mental states not susceptible of definition.*

Let it be observed, in the second place, that our simple notions CANNOT BE DEFINED.—This view of them follows necessarily from what has been said of their oneness and inseparableness, compared with what is universally understood, by defining. In respect to definitions it is undoubtedly true, that we sometimes use synonymous words for the same thing, and give it the name of defining, but it is not properly such. It is expected in defining, and is implied in the meaning of the term itself, that the subject will be made clearer, but this is never done directly by the use of synonymous terms, and oftentimes is not done by them in any way.

In every legitimate definition, the idea, which is to be defined, is to be separated, as far as may be thought necessary, into its subordinate parts; and these parts are to be presented to the mind for its examination, instead of the original notion, into which they entered. This process must be gone through in every instance of accurate defining; this is the general and authorized view of definition; and it is not easy to see, in what else it can well consist.

But this process will not apply to our simple thoughts and feelings, because if there be any such thing as simple mental states, they are characterized by inseparableness and oneness. And, furthermore, if we define ideas by employing other ideas, we must count upon meeting at last with such as shall be ultimate, and will reject all verbal explanation; otherwise we can never come to an end in the process.—So that the simple mental affections are not only undefinable in themselves; but, if there

were no such elementary states of mind, there could be no defining in any other case ; it would be merely analysis upon analysis, a process without completion, and a labour without end ; leaving the subject in as much darkness as when it was begun.

§. 134. *Futility of the definitions of the Schools.*

It is well known to have been a serious mistake of the Schoolmen, that they undertook to give a definition of ideas of the class, which we are now considering. This course evidently tended to disturb and weaken the foundations of all reasoning and knowledge. The folly of it probably cannot be more strikingly shown, than by referring to some instances, which are to be found in their writings. Among numerous other abortive attempts of this sort, they have given us a definition of *motion*, which is usually and justly classed as one of our simple states of mind. It was defined by the Schoolmen *ACTUS ENTIS IN POTENTIA QUATENUS IN POTENTIA*, the act of a being in power as far forth as in power. This, instead of making our idea of motion clearer than it was before, is altogether unintelligible.—At a later period it has also been defined a passage from one place to another. To this definition there is this objection, that passage is synonymous with motion, and that it amounts to no more than to say, that motion is motion from one place to another.

Every person is supposed to understand the meaning of the word, *light*. The Schoolmen, in order to render what was already perfectly well understood, more clear and easy to the comprehension of people, defined it *THE ACT OF PERSPICUOUS AS FAR FORTH AS PERSPICUOUS*. This definition is equally futile with either of the foregoing. If it should be stated to a blind man, who had never possessed the faculty of sight, it is very evident, that he would derive no information from it. We are probably as wise, however, on having this definition given us, as when we are told, that the *ESSENCE* of beings is that by which a thing is what it is ; that *RELATFON* is the reference one

thing bears to another ; and that DURATION is existence free from destruction.

These instances among numerous others show the folly of all attempts of this kind ; sufficiently evincing that they will tend to perplex rather than advance knowledge. They teach the mind to look inward upon itself, to examine the foundations and boundaries of knowledge, and to rest satisfied with its own experiences. And if a different course is pursued, by whomsoever done and with whatever parade of learning, the pursuit of truth will always dwindle into verbal disputes, and hairbreadth distinctions.

It is with good reason, therefore, that Mr. Stewart highly commends Des Cartes for setting this subject in a clear light, and giving it a prominent place in his metaphysical writings. He speaks of his *humorous* exposition of the common logical error of attempting to define words, which express notions too simple to admit of analysis ; and adds the remark, that Mr. Locke claims this improvement as entirely his own, but the merit of it unquestionably belongs to Des Cartes.*

§. 135. *Means of obtaining a knowledge of our simple notions.*

Although nothing is more clearly settled in Mental Philosophy, than the existence of simple ideas, characterized by their inseparableness and unity, and that they are of course undefinable, the objection is sometimes made, that this doctrine leaves that part of our knowledge in great obscurity. As we are utterly unable to make them any clearer by definition, and by merely using other words, some persons may profess not to understand what is meant by the terms, extension, solidity, heat, cold, red, sweet, unity, desire, pleasure, existence, power, and other

* Stewart's Historical Dissertation, Pt. I. ch. 2.—Mr. Locke was unacquainted with what Des Cartes had said on this subject. Nor were these views wholly new, although but very imperfectly understood and developed, even so early as the time of the last mentioned writer.

names of our simple thoughts and feelings.—If there is a difficulty here, it will be likely to remain so ; we must take our nature as it is, in all its essential and original features, and are unable to alter it. But the truth is, there is no difficulty ; as a general statement, the simple mental states are more clear and definite to our comprehension than others, notwithstanding their undefinableness. They are the direct offspring of nature, and it is not often that she leaves her own work unformed, darkened, and indefinite.

In those few instances, however, (for such may perhaps be found,) where there happens to be a degree of mental obscurity resting on them, we are able to assist the conceptions of others, by a statement of the circumstances, as far as possible, under which the simple idea exists. And having done this, we can merely refer them to their own senses, their own consciousness and personal experience, as the only teacher, from which they can expect to receive any tolerable satisfaction. Simple ideas and feelings derive both their existence and character from the constitution of the mind itself ; in the event and issue of their inquiries, the mind alone, as it comes under their own inspection, can tell them, what they are.

§. 136. *Origin of complex notions and their relation to simple.*

Our simple notions, which we have thus endeavoured to explain, were probably first in origin. There are reasons for considering them as antecedent in point of time to our complex mental states, although in many cases it may not be easy to trace the progress of the mind from the one to the other. The complex notions of external material objects embrace the separate and simple notions of extension, hardness, colour, taste, and others. As these elementary parts evidently have their origin in distinct and separate senses, it is but reasonable to suppose, that they possess a simple, before they are combined together in a complex existence. Simple ideas, therefore, may justly be regarded as antecedent in point of time to those, which are complex, and as laying the foundation of them.

Hence we see, that it is sufficiently near the truth, and that it is not improper, to speak of our complex ideas, as derived from, or made up of simple ideas. This is the well known language of Mr. Locke on this subject ; and when we consider how much foundation there is for it in the constitution and operations of the human mind, there is good reason for retaining it.

Although purely simple ideas and emotions are few in number, vast multitudes of a complex nature are formed from them. The ability, which the mind possesses of originating complex thoughts and feelings from elementary ones, may be compared to our power of uniting together the letters of the alphabet in the formation of syllables and words.

§. 137. *Of the precise sense in which complexness is to be understood.*

But while we distinctly assert the frequent complexness of the mental affections, it should be particularly kept in mind, that they are not to be regarded in the light of a material compound, where the parts, although it may sometimes appear to be otherwise, necessarily possess no higher unity than that of juxtaposition, and of course can be literally separated from each other, and then put together again. There is nothing of this kind ; neither putting together, nor taking asunder, in this literal and material sense. But if our thoughts and feelings are not made up of others, and are not complex, in the material sense of the expressions, what then constitutes their complexness ? This inquiry gives occasion for the important remark, that complexness in relation to the mind is not literal, but virtual only. What we term a complex feeling is in itself truly simple, but at the same time it is equal to many others ; and is complex only in that sense. Thought after thought, and emotion, following emotion, passes through the mind ; and as they are called forth by the operation of the laws of association, many of them necessarily have relation to the same object. Then there follows a new state of mind, which is the result of those previous feel-

ings, and is complex in the sense already explained. That is to say, it is felt by us to possess a virtual equality to those separate antecedent thoughts and emotions. Our simple feelings are like streams coming from different mountains, but meeting and mingling together at last in the common centre of some intermediate lake ; the tributary fountains are no longer separable ; but have disappeared, and become merged and confounded in the bosom of their common resting place. Or they may be likened to the cents and dimes of the American coinage, tens and hundreds of which are represented by a single EAGLE ; and yet the eagle is not divided into a hundred or thousand parts, but has as much unity as the numerous pieces, for which it stands.

The language, which expresses the composition and complexity of thought, is, therefore, to be regarded as wholly metaphorical, when applied to the mind, and is not to be taken in its literal meaning. We are under the necessity of employing in this case, as in others, language which has a material origin, but we shall not be led astray by it, if we carefully attend to what has been said, and endeavour to aid our conception of it by a reference to our internal experience.

§. 138. *Illustrations of analysis as applied to the mind.*

The subject of the preceding section will be the better understood by the consideration of Analysis as applicable to the mind. As we do not combine literally, so we do not untie or separate literally ; as there is no literal complexity, so there is no literal resolution or analysis of it. Nevertheless we have a meaning, when we speak of analyzing our thoughts and feelings. And what is it ? What are we to understand by the term analysis ?

Although this subject is not without difficulty, both in the conception, and in the expression of it, it is susceptible of some degree of illustration.—It will be remembered, that there may be analysis of material bodies. The chemist analyzes, when he takes a piece of glass, which appears to be one substance, and finds, that it is not one, but is separable into silicious and alkaline matter. He takes

other bodies, and separates them in like manner ; and whenever he does this, the process is rightly called analysis.

Now we apply the same term to the mind ; but the thing expressed by it, the process gone through, is not the same. All we can say is, there is something like this. We do not resolve and separate a complex thought, as we do a piece of glass, or other material body into its parts ; we are utterly unable to do it, if we should seriously make the attempt ; every mental state is in itself and in fact simple and indivisible, and is complex only virtually. Complex notions are the results, rather than the compounds of former feelings ; and though not literally made up of parts, have the relation to them, which any material whole has to the elements composing it ; and in that particular sense may be said to comprehend or embrace the subordinate notions. Mental analysis accordingly concerns merely this relation. We perform such an analysis, when, by the aid of our reflection and consciousness, we are able to indicate those separate and subordinate feelings, to which, in our conception of it, the complex mental state is virtually equal.

The term GOVERNMENT, for instance, expresses a complex feeling ; we may make this feeling, which is in fact only one, although it is virtually more than one, a subject of contemplation ; and we are said to analyze it, when we are able to indicate those separate and more elementary notions, without the existence and antecedence of which, it could not have been formed by the mind. We do not literally take the complex state in pieces, but we designate other states of mind which, every one's knowledge of the origin of thought convinces him, must have preceded it, such as the ideas of power, right, obligation, command, and the relative notions of superiour and inferiour.

§ 139. *Of supposed complexness without the antecedence of simple feelings.*

While the great distinction of simplicity and complexness in reference to the mental affections will be readily admitted, some persons may be disposed to make an objection to the doctrine, which has been maintained in the

course of this chapter, that complex mental states are subsequent in point of time to those, which are simple. They adopt the opinion, that some at least of our complex notions are framed at once and immediately, whenever an occasion presents itself, and are not necessarily dependent on the prior existence of any other feelings. When the eye, for instance, opens on a wide and diversified landscape, they suppose the whole to be embraced in one complex mental state, the formation of which is not gradual and susceptible of measurement by time, but is truly instantaneous. When we direct our attention to objects of less extent, as a portrait, a landscape or historical painting, they imagine it to be still more evident, that the complexity of mind, corresponding to the complexity of the object, is a result without any antecedent process. Without doubt what has now been said is in some instances apparently the case ; but this appearance, (for we cannot speak of it as any thing more than such,) is susceptible of an obvious explanation, without an abandonment of the general principle, which has been laid down. No one is ignorant, that the mind often passes with exceeding rapidity along the successive objects of its contemplation. This rapidity may in some cases be so great, that no foundation will be laid for remembrance ; and of course in such cases the complex feeling has the appearance of being formed without the antecedence of other simple feelings. Often the eye glances so rapidly over the distinct parts of the portrait, the historical painting, or even the wide landscape, that we are utterly unable in our recollection to detect the successive steps of its progress. There naturally seems, therefore, to be but one view, instead of distinct and successive glancings of the mind from hill to hill, from forest to forest, and from one verdant spot to another, prior to the supposed one and instantaneous comprehension of the whole. But it is in seeming and appearance only and not in fact ; it may be regarded as a sort of self-imposition, necessarily attendant on the limited nature and imperfection of the mind.

CHAPTER THIRTEENTH.

GENERAL CLASSIFICATION.

§. 140. *The mental states divided into intellectual and sentient.*

WHAT has hitherto been said has aided in preparing the way for the consideration of the mental acts, exercises, or states. And with the consideration of this topic, is necessarily connected the examination of the susceptibilities or powers, to which they owe their origin, or with the action of which they are intimately combined. This is a vast subject, beset with many perplexities, but which, it is hoped, will be rendered more easy and simple, by having taken out from it, and considered separately the topics, which have hitherto come under our notice.

One cause of perplexity in the inquiries, on which we are next to enter, is, that our mental states often closely resemble each other in their characteristics, or are much intermingled in other ways and for other causes, and that hence it is often difficult to separate and class them. But it is obviously impossible to consider them in the mass, for that would lead to utter confusion ; it is impossible also to consider them individually, for that would be labour without end ; there must be a classification of some kind either more or less general. With this object, therefore, in view, we make the various exercises of the mind the subject of our contemplation, and the result of this

examination, is, that we find them susceptible of a generic arrangement, the outlines of which, whatever may be true in respect to its details, have been universally detected. The arrangement, to which we refer, is that of the division of the mental states into Intellectual and Sentient.

§. 141. *Evidence in favour of this classification from what we observe in men generally.*

We find some evidence of the propriety of this general arrangement, of this partitioning, if we may so speak, of our mental nature, in the conduct and characters of men, as they pass under our observation. The classification in question is not merely to be found in books ; it is not the work of mere scholars ; but is clearly recognized in the language and conduct of men generally. Those men without education, who merely express what they feel, without any formal attempt at analyzing their feelings, have observed, and detected, and asserted it. How common it is for them to refer to occasions, where, in their own method of expressing it, their understandings were convinced, but their hearts were not affected ! And do they not unconsciously indicate in such language the line of demarcation, which the Creator of the mind has drawn between its intellectual and sentient nature ? Nor is this remark of trifling consequence. It is no small evidence of the existence of the generic distinction under consideration, when we find it acknowledged by the unlettered, as well as by the mere scholar. The elements of human nature were not given stintedly and by measure ; they were not apportioned out to those, on whom the favours of rank and learning happened to be conferred, to the exclusion of the poor and the ignorant, but beam in every human countenance, and speak even in the language of the outcast and degraded slave.

But there are other men, who furnish a lesson on this subject. If we look among those, who are allowedly possessed of the highest intellectual attainments and culture, we shall not unfrequently observe in two men a per-

fect likeness in the intellect, but an utter discrepancy in the heart. Both possess clearness of perception, resources of knowledge, eminent powers of reasoning, and all in equal degree. What then? The heart of the one, (the SENTIENCE, if it were allowed so to speak,) is all kindness, truth, and justice; he is an Aristides, a Washington, earnestly seeking to do good, and incapable of intentionally doing wrong; while that of the other is the den and loathsome lodging place for envy, falsehood, cruelty, deceit, and every evil thing.

Look at the individuals, who compose Congresses and Parliaments, and other select and established congregations of great men; take the measurement of their knowledge, the gauge of their intellectual invention; and many will be found, showing the same compass, and bearing an equality of impress. Then turn from the intellect, and look into that better and higher sanctuary of the soul, which is the residence of the feeling, the hope, the desire, the moral sentiment, and it will require no remarkable gift of perception to discover a difference in those, who in the other respect were essentially equal. One is endeavouring to crush the powerless, another is too high-minded to bruise a broken reed; one acts wholly for himself, another for his country; one feels for his country and that is all, another adds to his love of country the love of mankind; one will sell his vote for two farthings, another will sooner part with his right hand or right eye, than break his agreement with his honour and conscience.

Now we feel at liberty to build up a conclusion in view of these facts. We deem ourselves warranted in deducing the inference, that there is in man's mind a combination of nature. Something is meant, when we use the word UNDERSTANDING in distinction from the HEART. There is a sentient, as well as an intellectual constitution; there are cognitive powers, and there are susceptibilities of emotion.

§. 142. *This classification frequently recognized in writers.*

Although on this subject we have looked to the unlettered multitude, and men of business and action first, we are by no means to exclude mere men of letters, and to hold their testimony, in whatever way it may be given, as unimportant. Literary writers of eminence for the most part clearly recognize, either directly or indirectly, the generic arrangement, which has been proposed. It is perhaps unnecessary to make the remark, that Locke, although he did not limit himself to one class of subjects, took for his principal and prominent topic the INTELLECT; the title page of his great work intimates this; it reads, *An Essay concerning Human Understanding*; but Edwards, who was animated with the hope of seeing men brought nearer to their Creator, selected the higher part of human nature as the great object of his inquiries, and treated of the Will and the Affections. Mr. Stewart professedly extended his inquiries, and at some length, to both parts of our constitution. He alludes in very clear terms to the distinction between them in the introduction of his *Philosophy of the Active and Moral Powers*.—"In my former work on the Human Mind (he remarks) I confined my attention almost exclusively to Man, considered as an *intellectual being*; and attempted an analysis of those faculties and powers, which compose that part of his nature, commonly called his *intellect* or his *understanding*."

But it is not to professed writers on these subjects, that we would refer in this case; the distinction is made by authors, who cannot be supposed to have ever studied the mind as a science. The Roman Historian indicates it, when he informs us, that Mutius Scævola purposely consumed his hand in the fire, and meanwhile exhibited outwardly as little sensibility to suffering, as if his intellect were separated from the power of feeling, (*quam quum velut alienato ab sensu torreret animo.*) It is indicated also by a later historian of the same great nation, when he says of Cataline, (*fuit magna vi animi, sed ingenio malo pravoque,*) that he possessed a vigorous intellect,

but in his disposition was evil and depraved. And we might ask, What historian or poet, of any age or people, has given a faithful sketch of man for any length of time, without being compelled to recognize the same distinction, in what they so uniformly inform us of the strivings of the judgment against the passions, and of the passions against the judgment?

In the first book of the *Novum Organum*, Bacon remarks, that the intellect, in numberless ways and often without our perceiving it, is under the influence of the feelings, (*affectus intellectum imbuit et inficit*;) and in doing so he clearly admits the distinction, which we are contending for, between the feeling or sentient, and the intellectual part of the soul. He evidently speaks of it as something well known, as something not to be controverted. The whole passage, which forms the 49th Aphorism, is worthy of notice for its philosophical sagacity and truth.

“*Intellectus humanus luminis sicci non est ; sed recipit infusionem a voluntate et affectibus ; id quod generat, ad quod vult, scientias ; quod enim mavult homo verum esse, id potius credit. Rejicit itaque difficilia ob inquirendi impatientiam ; sobria quia coarctant spem ; altiora naturæ, propter superstitionem ; lumen experientiæ, propter arrogantiam et fastum, ne videatur mens versari in vilibus et fluxis ; paradoxa, propter opinionem vulgi ; denique innumeris modis, iisque interdum imperceptibilibus, affectus intellectum imbuit et inficit.*”

§. 143. *Languages referred to in proof of this generic arrangement.*

It is further worthy of notice, that there is a multitude of words in the various dialects of men, which have a relation to the arrangement before us. In our own language, when the discourse relates to our sentient constitution, we employ the terms, feelings, emotions, desires, passions, affections, inclinations, and the like ; but when it relates to the understanding, we employ another set of words, viz, perceptions, thoughts, notions, ideas, intellectual states, &c.—It is true, there are other terms of a

more general nature, (as when we speak of the states, acts, or exercises of the mind,) which are applied to both classes indiscriminately, but those, which have been mentioned, are commonly restricted in their application, and are not, as a general statement, interchanged with each other.

Well may we conclude, therefore, inasmuch as language is designed by the framers of it to be a sort of representative of the mind, that the great distinction, which has now been laid down, is well founded. The existence of these distinct classes of terms, which were not framed without an object, and without an adequate reason, cannot be accounted for, except on the ground, that there is a corresponding distinction in the mind's acts. And if there be a distinction in the acts, or exercises, there is of course a distinction in the mind itself, a twofold nature, the outlines of which, we again venture to assert, will not fail to discover themselves in every individual, in whom the elements of humanity exist in so high a degree as to render him an object of notice at all.

On any other grounds, what shall we make of the expressions, which have been already referred to in eminent writers? What shall we say, (to take a single instance out of the multitude, that might be brought together,) of the following language of a learned critic,* in relation to a speech of Mr. Fox in Parliament, on the great question of the Slave Trade ;—"It is among the happiest productions of a rapid and vigorous INTELLECT, called into action suddenly by the warmth of an honest and noble HEART. The FEELING seems all INTELLECT; the INTELLECT all FEELING."

§. 144. *The nature of this classification a matter of consciousness.*

The classification, which we are considering, is the more important, because it is founded, not in the mere circumstances attending the origin of the mental states, but in the nature of the states themselves. We feel, we know them to be different. But when we are required

*Edin. Review on Clarkson's History of the Abolition of the Slave Trade, July 1808.

to state with precision what the actual difference is between these two classes of the exercises of the soul, it cannot be denied, that the question is more readily proposed, than answered. A man may believe and know himself, (it is very often the case,) what he may find it difficult to communicate, and explain to others. An inability to set forth in words the nature of any particular acts of the soul is not a proof, that those exercises do not exist, or that the condition of one state of the mind does not differ from that of another.

On the contrary it may be answered in this case, as in others, that every person knows from his CONSCIOUSNESS, that great and ultimate guide which Providence has given men, that there is not only a difference, but a radical and essential difference between the two classes.

No one, for instance, can be supposed to be insensible of this diversity in the mental states, expressed by the terms, truth, belief, certainty, order, equality, and the like, and those, expressed by the terms, pleasure, pain, hope, desire, love, &c. We refer, therefore, on this point to each one's internal experience, to his own consciousness.

“Every man, (says Condillac, *Origin of Knowledge*, Pt. I. CH. I,) is conscious of his thought; he distinguishes it perfectly from every thing else; he even distinguishes one thought from another; and that is sufficient. If we go any further, we stray from a point, which we apprehend so clearly, that it can never lead us into error.”

§. 145. *Of the different names given to it.*

It remains to be remarked further, that the explicit and scientific statement of this classification is by no means new; on the contrary, in its essential features, it has repeatedly made a formal appearance under various names. Some of these designations will be briefly referred to.

I, Cognitive and Motive.—A long time since, it was proposed, particularly by Mr. Hobbes, to employ these two words, as expressive of the general division under consideration. Undoubtedly the epithet COGNITIVE, whether we consult its etymology or its meaning as

established by use, is sufficiently applicable to that part of our mental nature, which regards the mere origin of knowledge, as perception, judgment, reasoning, &c. The term **MOTIVE**, as indicative of the other part of our mental constitution, was probably adopted on the ground, that our emotions, desires, and passions are particularly connected with movement or action. This nomenclature seems not, however, to have been generally adopted.

“The terms *cognitive* and *motive*, (says Mr. Stewart, *Elements*, Pt. II,) were long ago proposed for the same purpose by Hobbes ; but they never appear to have come into general use, and are indeed liable to obvious objections.”

II, The Understanding and Will.—The generic classification, which we have been considering, has made its appearance also under these names. We have already had occasion to refer to Locke and Edwards; those distinguished writers not only recognized the classification in question, and made it the basis of the particular direction of their great efforts, but frequently employed this phraseology as expressive of it. Under the term **Understanding** was included the whole intellectual, the thinking and reasoning part of our nature. By the **Will** seems to have been meant that ability, in whatever way it might exhibit itself, which was supposed to be necessary in bringing the mental constitution into action ; it was the mind's impelling and controlling principle ; something which moved and governed it. To determine precisely, however, what feelings and operations belonged to the one and what belonged to the other was by no means a matter well settled, but of no small doubt and contention. The designation of the arrangement by these names has consequently fallen into comparative discredit. The word **Understanding**, however, is still employed in its original extent, as synonymous with intellect ; the word **Will**, with a much restricted signification.

III, Intellectual and Active Powers.—For the epithet **MOTIVE**, proposed by Hobbes, the term **Active** has been substituted by some modern writers, particularly

Reid and Stewart. This epithet, like that for which it was substituted, was probably introduced on the ground, that the sentient part of our nature is immediately and particularly connected with motion, effort, or action. It is probably not meant to be intimated by those, who adopt this designation, that the feelings and powers, included under it, possess in themselves more activity than others, but are active in the sense of being particularly connected with, and leading to action ; which is undoubtedly the truth.

On these different designations we would briefly remark, that the name is of less consequence, than the thing intended to be expressed by it. It is undoubtedly necessary to be understood in what we say ; but further than that, the mere expression, although it is not to be neglected, is of subordinate importance. It is even convenient to have at command more than one form of expression, in order to avoid the disagreeable effect of a too frequent repetition of the same words and phrases. And there is no difficulty in this, if the reader will but take the pains to observe the connection, and to limit the meaning of the particular expression by it.

§. 146. *Classification of the intellectual states of the mind.*

For the reasons, which have been given, we find ourselves authorized, in the first place, in considering the states, exercises, or acts of the mind, (for these terms, the most general we can employ, will apply to both classes,) under the two general heads of Intellectual and Sentient. Our intellectual states of mind, together with their corresponding susceptibilities and powers, will first come under consideration. On looking attentively, however, at the intellectual part of our nature, we readily discover, that the results, which are to be attributed to it, are susceptible of a subordinate classification, viz, into INTELLECTUAL STATES of External, and those of Internal origin.

It is presumed, that on a little examination this distinction will be sufficiently obvious. If the mind were insulated and cut off from the outward world, or if there were no such outward world, could we feel, or see, or

hear? All those mental affections, which we express, when we speak of the diversities of taste and touch, of sound and sight, are utterly dependent on the existence and presence of something, which is exterior to the intellect itself. But this cannot be said of what is expressed by the words, truth, falsehood, opinion, intelligence, cause, obligation, effect, and numerous creations of the intellect of a like kind.

It is worthy of remark, that the subordinate classification, which is now proposed to be made, did not escape, in its essential characteristics, the notice of very ancient writers. We have the authority of Cudworth,* that those intellectual states, which have an internal origin, bore among the Greeks the name of NOEMATA, *thoughts or intellects*; while those of external origin were called AISTHEMATA, *sensations*. Although this classification, the grounds of which cannot fail readily to present themselves, has been recognized and sanctioned, in some form or other, by numerous writers on the human mind, some future opportunity will be found more fully to explain and defend it; the objections, which have been made, will not be overlooked; and it will readily be perceived, that we shall be the better prepared for this proposed explanation, after having considered the relation, which the mind sustains to the external world by means of the senses, and analyzed the knowledge, which has its origin in that source.

* Cudworth's Immutable Morality, Bk. IV. c. 1.

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PART SECOND.

INTELLECTUAL STATES OF THE MIND

CLASS FIRST.

INTELLECTUAL STATES OF EXTERNAL OBJECTS

[illegible]

...and the fact that the *Journal* is a journal of the American Psychological Association, the largest and most influential organization in the field of psychology, adds to the significance of the work.

.....

THE

1. *Journal of the American Medical Association*, 2000; 284: 2689-2694.

CHAPTER FIRST.

ORIGIN OF KNOWLEDGE IN GENERAL.

§. 147. *Of the mind considered in itself.*

HAVING arrived at this point in our inquiries, where we are to start forth on a new track, it is natural to cast a glance back on the road we have gone over ; and it is no exaggeration to say, that we have found grounds of admiration and encouragement in what has fallen under our notice. We have seen undoubted proof of the greatness of the mind, of the variety of its elementary resources, and of its essential excellence ; and yet we have only gone round it like casual visitors ; we have merely seen the outlines and boundaries ; we have counted the towers and bulwarks at a distance ; and can hardly say, that we have opened the gates, and entered into the inner part of the city.

The mind of man may be contemplated in itself. As a matter of speculation, such a view of it will do no harm ; although in point of fact, the mind never was, and never can be separated from the relations it sustains to every part of the universe, and to the great Creator of the Universe. As a mere matter of speculation, however, we may direct our attention to it, considered as separate from every thing else ; and there will be found to be something pleasing and exalting in such contemplations. If we suppose its powers to be in their strength and as-

tivity, and at the same time exclude the consideration of every thing exterior, which might be imagined to be the cause of this activity, the mind has the appearance of being a self-supplying, and original energy. It seems to us like the sun in the heavens, a perpetual fountain-head of illumination, streaming outward in every direction, and overflowing all things with brightness.

Plato among the ancients, and Malebranche among the moderns seem to have been pleased with taking this view; those peculiar traits of thought, which are ascribed to them, may be accounted for in part on the ground of a great retirement into themselves, and a predominant love of interior inspection. And certainly to a serious and contemplative mind, there is something peculiarly fascinating in this course. When men are sick of the world without, as they often find occasion to be, there is always a world within, in which they can seclude themselves. In the indulgence of this inward retirement, they have an opportunity not only to search out the mind's hidden treasures of thought, emotion, and energy, but to contemplate also the marks and signatures of that divine and more glorious Intelligence from whom it came.

§. 148. *Connection of the mind with the material world.*

But after all, the speculations referred to in the last section will be likely to lead us astray, and to give a distorted view of the mind, if they are pursued too far, or are not limited, and guarded with sufficient care. An entire separation of the soul and its action from every thing else is merely a supposition, an hypothesis, which is not realized in our present state of being. What the soul will be in a future state of existence is of course another inquiry. It is possible, that it may be disburdened, more than it is in this life, of connections and dependencies, and will possess more freedom and energy; but it seems to be our appropriate business at present to examine it, as we find it here.

Whatever Providence may have in reserve for us in a future state, it is obvious, that in our present existence it

has designed, and established an intimate connection between the soul, and the material world. We have a witness of this in the mere fact of the existence of an external creation. Was all this visible creation made for nought? Are the flowers not only of the wilderness, but of the cultivated place, formed merely to waste their sweetness on the desert air? Are those harmonical sounds and ravishing touches, that come forth from animate and inanimate nature, uttered, and breathed out in vain? Can we permit ourselves to suppose, that the symmetry of form, every where existing in the outward world, the relations and aptitudes, the beauties of proportion, and the decorations of colours exist without any object? And yet this must be so, if there be no connection between the soul of man, and outward objects. What would be proportion, what would be colour, what would be harmony of sound without the soul, to which they are addressed, and from which they are acknowledged to derive their efficacy? Where there is no soul, where there is a deprivation and want of the conscious spirit, there is no sight, no hearing, no touch, no sense of beauty. Every thing depends on the mind; the senses are merely the medium of communication, the conditions and helps of the perceptions, and not the perceptions themselves.

With such considerations we justify what has been said, that Providence designed, and established an intimate connection between the soul, and the material world.

And there is another train of thought, which leads to the same conclusion. On any other supposition than the existence of such a connection, we cannot account for that nice and costly apparatus of the nerves and organs of sense, with which we are furnished. Although we behold on every side abundant marks of the Creator's goodness, we may safely say, he does nothing in vain. The question then immediately recurs, What is the meaning of the expenditure of the Divine goodness in the formation of the eye, in the windings and ingenious construction of the ear, and in the diffusion of the sense of

touch? We cannot give a satisfactory answer to this question, except on the ground, that there is a designed and established connection between the mind, and the material world. If we admit the existence of this connection, every thing is at once explained.

§. 149. *Of the origin or beginnings of knowledge.*

The Creator, therefore, established the relation between mind and matter ; and it is a striking and important fact, that, in this connection of the mental and material world, we are probably to look for the commencement of the mind's activity, and for the beginnings of knowledge. The soul, considered in its relationship to external nature, may be compared to a stringed instrument. Regarded in itself, it is an invisible existence, having the capacity and elements of harmony. The nerves, the eye, and the senses generally are the chords and artificial frame-work, which God has woven round its unseen and unsearchable essence. This living and curious instrument, which was before voiceless and silent, sends forth its sounds of harmony, as soon as it is swept by outward influences. But this, it will be noticed, is a general statement ; the meaning may not be perfectly obvious, and it will be necessary to descend to some particulars.

There are certain elementary notions, which seem to be involved in, and inseparable from our very existence, such as self, identity, &c. The supposition would be highly unreasonable, that we can exist for any length of time without possessing them. It is certain, that these notions are among the earliest, which men form ; and yet cautious and judicious inquirers into the mind have expressed the opinion, that even these do not arise, except subsequently to an impression on the organs of sense.

Speaking of a being, whom, for the sake of illustration, he supposes to be possessed of merely the two senses of hearing and smelling, Mr. Stewart makes this remark. —“ Let us suppose then a particular sensation to be excited in the mind of such a being. The moment this happens he must necessarily acquire the knowledge of two

facts at once ; that of the existence of the sensation, and that of his own existence, as a sentient being.”* This language clearly implies, that the notions of existence and of person or self are attendant upon, and subsequent to an affection of the mind, caused by an impression on the senses. In his *Essays* he still more clearly and decisively advances the opinion, that the mind is originally brought into action through the medium of the senses, and that human knowledge has its origin in this way.—“All our simple notions, (he says, *Essay III.*) or, in other words, all the primary elements of our knowledge are either presented to the mind immediately by the powers of consciousness and perception, or they are gradually unfolded in the exercise of the various faculties, which characterize the human understanding. According to this view of the subject, the sum total of our knowledge may undoubtedly be said to originate in sensation, inasmuch as it is by impressions from without, that consciousness is first awakened, and the different faculties of the understanding put in action.”†

Perhaps this subject, however, will always remain in some degree of doubt; and we have merely to say, that of the various opinions, which have been advanced in respect to it, we give the preference to that which has been referred to, as supported by Stewart, De Gerando, and other judicious writers, without any disposition to assert its infallibility. The mind appears at its creation to be merely an existence, involving certain principles, and endued with certain powers, but dependant for the first and original developement of those principles and the exercise of those powers on the condition of an outward impression. But after it has once been brought into action, it finds new sources of thought and feeling in itself.

**Philosophy of the Human Mind*, Vol. I, ch. 1. See also §. 17, 18 of this Work.

†Views, similar to those of Mr. Stewart, are maintained by De Gerando in a Memoir, entitled, *De la Generation des Connoissances Humaines*.

§. 150. *Our first knowledge in general of a material or external origin.*

If we know not how a single leaf is formed, and are baffled, when we attempt to explain the growth even of a blade of grass, it is not surprising, that we should fail of absolute certainty in explaining the first cause of the mind's action, and the history of the first feeling, to which it gives birth. But whatever may be true of the first mental exercise, whether its existence be dependent on the condition of some external impression on the senses or not, it may be shown beyond doubt, that during the early period of life the connection of the mind with the material world is particularly close, and that far the greater portion of its acts and feelings can be traced to that source.

I,—What has been said will, in the first place, be found agreeable to each one's individual experience. If we look back to the early periods of life, we discover not merely, that our ideas are then comparatively few in number, but that far the greater proportion of them are suggested by external objects. They are forced upon us by our immediate wants; they have relation to what we ourselves see, or hear, or touch; and only a small proportion are internal and abstract. As we advance in years, susceptibilities and powers of the mind are brought into exercise, which have a less intimate connection with things external; and thoughts from within are more rapidly multiplied, than from without. We have in some measure exhausted that which is external, and as the mind, awakened to a love of knowledge and a consciousness of its powers, has at last been brought fully into action, by means of repeated affections of the senses, a new world, (as yet in some degree a *TERRA INCOGNITA*,) projects itself upon our attention, where we are called upon to push our researches, and gratify our curiosity.—This is the general experience, the testimony, which each one can give for himself.

In the second place, what has been said finds confir-

mation in what we observe of the progress of the mind in infants and children generally. The course of things, which we observe in them, agrees with what our personal consciousness and remembrance, as far back as it goes, enables us to testify with no little confidence in our own case. No one can observe the operations of the mind in infants and children, without being led to believe, that the Creator has instituted a connection between the mind and the material world, and that the greater portion of our early knowledge is from an outward source.

To the infant its nursery is the world. The first ideas of the human race are its particular conceptions of its nurse and mother ; and the origin and history of all its notions may be traced to its animal wants, to the light that breaks in from its window, and to the few objects in the immediate neighbourhood of the cradle and hearth. When it has become a few years of age, there are other sources of information, other fountains of thought, but they are still external and material. The child then learns the topography of his native village ; he explores the margin of its river, ascends its flowering hills, and penetrates the seclusion of its vallies. His mind is full of activity ; new and exalting views crowd upon his perceptions ; he beholds, and hears, and handles ; he wonders, and is delighted. And it is not till after he has grasped the elements of knowledge, which the outward world gives, that he retires within himself, compares, reasons, and seeks for causes and effects.

It is in accordance with what has now been stated of the tendencies of mind in children, that we generally find them instructed by means of sensible objects, or by pictures of such objects. When their teachers make an abstract statement to them of an action or event, they do not understand it ; they listen to it with an appearance of confusion and vacancy, for the process is undoubtedly against nature. But show them the objects themselves, or a faithful picture of them, and interpret your abstract expressions by a reference to the object or picture, and they are observed to learn with rapidity and pleasure.

The time has not yet arrived for the springing up and growth of thoughts of an internal and abstract origin.

§. 151. *Further proof of the beginnings of knowledge from external causes.*

In the third place, the history of language is a strong proof of the correctness of the position, that the mind is first brought into action by means of the senses, and acquires its earliest knowledge from that source. At first words are few in number, corresponding to the limited extent of ideas. The vocabulary of savage tribes, (those, for example, which inhabit the American continent,) is in general exceedingly limited. The growth of a language corresponds to the growth of mind ; it extends itself by the increased number and power of its words, nearly in exact correspondence with the multiplication and the increased complexity of thought. Now the history of all languages teaches us, that words, which were invented and brought into use one after another in the gradual way just mentioned, were first employed to express external objects, and afterwards were used to express thoughts of internal origin. It is an evidence of the correctness of this remark, that the words of a language are found to vary with the scenery, climate, and natural productions, to which those who speak it have been accustomed. If language were framed in the first instance to express thoughts of internal instead of external origin, the grounds of variation would be different.

Some writer remarks, that among the Boschuanas of South Africa, who live in a parched and arid country, the word PULO, which literally signifies rain, is the only term they have to express a blessing or blessings. But there may be blessings internal as well as external, goods and joys of the mind, as well as of the body ; still in the language of these Africans, it is all rain; the blessings of hope, and peace, and friendship, and submission, and all other modes of intellectual and sentient good, are nothing but rain.

There are thousands of instances of this kind. Al-

most all the words in every language, expressive of the susceptibilities and operations of the mind, may be clearly shown to have had an external origin and application, before they were applied to the mind. To IMAGINE in its literal signification implies the forming of a picture; to IMPRESS conveys the idea of leaving a stamp or mark, as the seal leaves its exact likeness or stamp on wax; to REFLECT literally means to turn back, to go over the ground again; &c. These words cannot be applied to the mind in the literal sense; the nature of the mind will not admit of such an application; the inference therefore is, that they first had an external application. Now if it be an established truth, that all language has a primary reference to external objects, and that there is no term, expressive of mental acts, which was not originally expressive of something material, the conclusion would seem to be a fair one, that the part of our knowledge, which has its rise by means of the senses, is, as a general statement, first in origin. And the more so, when we combine with these views the considerations, which have been previously advanced.

§. 152. *The same subject further illustrated.*

And, in the fourth place, it is not too much to say, that all the observations, which have been made on persons, who from their birth, or at any subsequent period, have been deprived of any of the senses, and all the extraordinary facts, which have come to knowledge, having a bearing on this inquiry, go strongly in favour of the views which have been given.—It appears, for instance, from the observations, which have been made in regard to persons, who have been deaf until a particular period, and then have been restored to the power of hearing, that they have never previously had those ideas, which naturally come in by that sense. If a person has been born blind, the result is the same; or if having the sense of sight, it has so happened, that he has never seen any colours of a particular description. In the one case, he has no ideas of colours at all, and in the other, only of

those colours, which he has seen.—It may be said perhaps, that this is what might be expected, and merely proves the senses to be a source of knowledge, without necessarily involving the priority of that knowledge to what has an internal origin. But then observe the persons referred to a little further, and it will be found, as a general statement, that the powers of their minds have not been unfolded ; they lay wrapt up in a great measure in their original darkness ; no inward light springs up to compensate for the absence of that, which in other cases bursts in from the outward world. This circumstance evidently tends to confirm the principle we are endeavouring to illustrate.

Of those extraordinary instances, to which we alluded, as having thrown some light on the history of our intellectual acquisitions, is the account, which is given in the Memoirs of the French Academy of Sciences for the year 1703, of a deaf and dumb young man in the city of Chartres. At the age of three and twenty, it so happened, to the great surprise of the whole town, that he was suddenly restored to the sense of hearing, and in a short time he acquired the use of language. Deprived for so long a period of a sense, which in importance ranks with the sight and the touch, unable to hold communion with his fellow beings by means of oral or written language, and not particularly compelled, as he had every care taken of him by his friends and relations, to bring his faculties into exercise, the powers of his mind remained without having opportunity to unfold themselves. Being examined by some men of discernment, it was found that he had no idea of a God, of a soul, of the moral merit or demerit of human actions, and what might seem to be yet more remarkable, he knew not what it was to die ; the agonies of dissolution, the grief of friends, and the ceremonies of interment being to him inexplicable mysteries.

Here we see how much knowledge a person was deprived of, merely by his wanting the single sense of hearing ; a proof that the senses were designed by our Creator to be the first source of knowledge, and that without

them the faculties of the soul would never become operative.

But this is not the only instance of this sort, which ingenious men have noticed and recorded. In the Transactions of the Royal Society at Edinburgh, (Vol. vii. Pt. 1.,) is a Memoir communicated by Dugald Stewart, which gives an account of James Mitchell, a boy born deaf and blind. The history of this lad, who laboured under the uncommon affliction of this double deprivation, illustrates and confirms all, that has been above stated. He made what use he could of the only senses which he possessed, those of touch, taste, and smell, and gained from them a number of ideas. It was a proof of the diligence, with which he employed the limited means, which were given him, that he had by the sense of touch thoroughly explored the ground in the neighbourhood of the house, where he lived, for hundreds of yards. But deprived of sight, of hearing, and of intercourse by speech, it was very evident to those, who observed him, as might be expected, that his knowledge was in amount exceedingly small. He was destitute of those perceptions, which are appropriate to the particular senses, of which he was deprived; and also of many other notions of an internal origin, which would undoubtedly have arisen, if the powers of the mind had previously been rendered fully operative by means of those assistances, which it usually receives from the bodily organs.—Such instances as these, however they may at first appear, are extremely important. They furnish us with an appeal, not to mere speculations, but to fact. And it is only by checking undue speculation, and by continually recurring to facts, that our progress in this science will become sure, rapid, and delightful.*

*The statements concerning the young man of Chartres are particularly examined in Condillac's Essay on the Origin of Knowledge at Section fourth of Part first. The interesting Memoir of Stewart has recently been republished in the third volume of his Elements of the Philosophy of the Human Mind.

§. 153 *Of connatural or innate knowledge.*

The considerations of this chapter naturally bring us upon the question of innate or connatural knowledge. It was formerly maintained by certain writers, that there are in the minds of men ideas and propositions, which are not acquired or taught at any time, or in any way, but are coetaneous with the existence of the mind itself, being wrought into, and inseparable from it. It was maintained, that they are limited to no one class, neither to the rich nor the poor, neither to the learned nor the ignorant, to no clime and to no country, but all participate in them alike. These propositions and ideas, being coetaneous with the existence of the soul, and being there established at the commencement of its existence by the ordinance of the Deity, were regarded as the first principles of knowledge, and as the rules, by which men were to be guided in all their reasonings about natural and moral subjects.

From these innate and original propositions the following may be selected as specimens of the whole;—(1) Of the natural kind, The whole is greater than a part ; Whatever is, is ; It is impossible for the same thing to be and not to be at the same time and in the same sense.—(2) Of the moral kind, Parents must be honoured ; Injury must not be done ; Contracts should be fulfilled, &c.—(3) Of the religious kind, There is a God ; God is to be worshipped ; God will approve virtue and punish vice.

§. 154. *The doctrine of innate knowledge not susceptible of proof.*

It will not be deemed necessary to spend much time on this subject, or to enter into any length of investigation. There is an utter absence of all satisfactory evidence, that there is in men any amount of knowledge whatever, answering to this description. The prominent argument, brought forward by the supporters of this doctrine, was this, that all mankind, without exception, and from the earliest period of our being able to form an acquaintance with their minds, exhibit a knowledge of ideas and proposi-

tions of this kind, and that this universal knowledge of them cannot be accounted for, except on the ground of their being coetaneous with the mind's existence, and originally implanted in it. Now if we admit that all men are acquainted with them and assent to them, this by no means proves them innate, so long as we can account for this acquaintance and this assent in some other way. It is granted by all, that the mind exists, that it is capable of action, and that it possesses the power or the ability of acquiring knowledge. If, therefore, in the exercise of this ability, which all admit it to have, we can come to the knowledge of what are called innate or connatural ideas and propositions, it is unnecessary to assign to them another origin, in support of which no positive proof can be brought.

But the truth is, that all men are not acquainted with the ideas and propositions in question, and especially do not exhibit such an acquaintance from the first dawn of their knowledge, as would be the case if they were connatural in the mind. The supposed fact, on which this argument is founded, is a mere assumption; it has never been confirmed by candid and careful inquiry, which ought to be done, before it is made use of as proof; nor is it susceptible of such confirmation.

Every enumeration of innate propositions embraces the following, That all men have a notion of a God; and undoubtedly if there be any one, which has a claim to universality and early developement, it is this. But in point of fact we know, that all men are not acquainted with this notion; the testimony of travellers among uncivilized nations has been given again and again, that there is not such an universal acquaintance; but on the contrary whole tribes of men in different parts of the world are found to be destitute of it. There is also a class of unfortunate persons to be found in civilized and christian nations, (we have the reference to the deaf and dumb, those in the situation of the young man of Chartres,) who will throw light on this subject, if men will but take the pains to examine those, who have in no way received reli-

gious instruction. There is reason to believe, that in many cases they will be found utterly without a knowledge of their Creator.

Massieu was the son of a poor shepherd in the neighbourhood of Bourdeaux. Destitute from birth of the sense of hearing, and as a natural consequence, of the power of speech, he grew up, and knew barely enough to enable him to watch his father's flock in the fields. Although his capacity was afterwards fully proved to be of the most comprehensive and splendid character, as it was not then drawn out and brought into action, he appeared in early life to be but little above an idiot. In this situation he was taken under the care of the benevolent Sicard, who was able, after great labour and ingenuity, to quicken by degrees the slumbering power of thought into developement and activity. Did his instructor suppose, that Massieu was acquainted with the notion of a God?—Far from it; he had abundant evidence to the contrary; nor did he even undertake to teach him that vast idea for some time. He directed his attention at first to knowledge more obvious and accessible in its origin; he led him, in perfect consistency with what is required by the nature and laws of the mind, by easy steps from one degree of knowledge to another, till he supposed him capable of embracing the glorious conception of a First Cause. Then he contrived to arouse his attention and anxiety; he introduced him to a train of thought, which would naturally bring him to the desired result; he had previously taught him the relation of cause and effect; and on this occasion he showed him his watch, and by signs gave him to understand, that it implied a designer and maker; and the same of a picture, a piece of statuary, a book, a building, and other objects, indicative of design. Then he held up before him a chain, showing him how one link was connected with, and dependent on another; in this way he introduced into the mind of Massieu the complex notion of a mutual dependence and concatenation of causes. At last the full idea, the conception of a primary, self-existent, and self-energetic cause, the notion of a God came,

like light from heaven, into his astonished and rejoicing soul. He trembled, says his historian, he was deeply affected, prostrated himself, and gave signs of reverence and adoration. And when he arose, he uttered by signs also, for he had no other language, these beautiful words, which his instructor declared he should never forget, Ah! Let me go to my father, to my mother, to my brothers, to tell them of a God; they know him not.*

Such facts and instances settle this question; they prove, that the doctrine of inborn and connatural knowledge is unfounded; and may we not add, that they are in perfect accordance with a well known passage of the Apostle Paul; *The invisible things of God, from the creation of the world, are clearly seen, being understood by the things that are made, even his eternal power and Godhead.*

§. 155. *The discussion of this subject superseded and unnecessary.*

It is an additional reason for not entering with more fullness and particularity into this inquiry, that the doctrine of innate or connatural knowledge has been frequently discussed at length and refuted; particularly by Gassendi and Locke, and more recently by De Gerando. This being the case, and public sentiment at the same time decidedly rejecting it, it cannot be supposed that every writer on the human mind is called upon to introduce the subject anew, to go over the train of argument, and slay a victim already thrice slain. Let us ask, Are we called upon at the present day to consider and refute every wild notion, which has ever been proposed? On that ground we should not stop here; we must follow Locke further, and undertake a confutation of the doctrine of Malebranche, that we see all things in God; we must follow Reid in his laboured and conclusive overthrow of the long established opinion, that we know nothing of the material world, except by means of filmy images or pictures, actually thrown off from outward objects, and lodged in the

* See the work of Sicard, entitled *Cours D'Instruction d'un Sourd-Muet de Naissance*, Chap. XXV.

sensorium. But such a course will be purposely avoided ; it would be alike toilsome and unsatisfactory ; it would be as unreasonable as to require from every author in Natural Philosophy a new confutation of the Alchemists, and to exact from every modern astronomer a like renewed discomfiture of long since exploded theories of the heavenly motions. Mr. Locke himself seems willing to admit, that the discussion does not naturally and necessarily make a part of Mental Philosophy ; and gives us clearly to understand that it holds so conspicuous a place in his Essay, merely from the accidental circumstance of the prevalence in his own time of the error, which he confuted. Accordingly when he prepared an abstract or abridgement of that work for Le Clerc's *Bibliothèque Universelle*, he omitted the whole of the Book on Innate Ideas.

Furthermore, the whole system of Mr. Locke, (and the same may be said of the views of Reid, Stewart, De Gerando, and Brown, who cannot be considered in the prominent outlines of their doctrines as essentially differing from him,) is an indirect, but conclusive argument against connatural knowledge. If the principles, which they advance, be right, the doctrine of innate knowledge is of course wrong, and requires no direct refutation.

The farmer sees the corn full-grown and waving in his field ; but he knows it would not have been there, had he not scattered the seed ; it has not become what it is, wholly independent of an external agency. And if the mind like the earth, possesses a natural fertility and capacity of producing still the results, of which it is capable, can as little be realized, except on certain conditions, as the earth can give out the waving cornfield without the previous planting of the seed. Something is requisite to bring the mind into action, and to keep it in action ; it requires the operation of influences from within and without, the atmosphere, the genial rains, and the gentle breezes, as well as its own internal laws and powers of growth ; and then the tender plant of thought comes forth ; it grows high and shoots out its branches ; it is clothed with leaves, and beautified with flowers, and in due season bears the ripe fruit.

§. 158. Further remarks on the rise of knowledge by means of the senses.

Considering it, therefore, as settled, that there is no ~~connatural~~ knowledge, we recur with increased confidence to the principle, which has been laid down in this chapter, that the mind is first brought into action by the inter-mediation of the senses, and that the greater part of its earliest knowledge is from an external source. The considerations, that have been adduced in support of this doctrine, are obvious and weighty; they account with much probability for the very beginnings of thought and feeling, and are entirely decisive of the character of our early acquisitions in general. The subject, however, is still open to reflection, and if it were needful, might be placed in other lights.

Let us then suppose a man entirely cut off from all outward material impressions, or what is the same thing, with his senses entirely closed. It is very obvious, and the instances already brought forward clearly prove, that he would be entirely deprived of that vast amount of knowledge, which has an immediate connection with the senses. But this is not all; there are other ideas, whose connection with the senses is less immediate, of which he would not fail to be deprived, by being placed in the circumstances supposed. Even if he should possess the idea of existence, and of himself as a thinking and sentient being, (although we cannot well imagine how this should be, independently of some impression on the senses,) still we have no reason to believe that he would know any thing of space, of motion, of succession, of duration, of the place of objects, of time, &c.

Now it will be noticed, that these are elementary thoughts of great importance; such as are rightly considered essential to the appropriate action of the mind, and to its advancement in knowledge. What could he know of time, without a knowledge of day and night, the rising and setting sun, the changes of the seasons, or some other of its measurements! What could he know

of motion, while utterly unable to form the idea of place! And what could he know of place without the aid of the senses! And under such circumstances, what reasoning would he be capable of, further than to form the single proposition, that his feelings, whatever they, might be, belonged to himself!

Look at the subject as we will, we must at last come to the conclusion, that the connection of the mind with the material world by means of the senses is the basis, to a great extent at least, of our early mental history, and the only key, that can unlock its explanation. A sketch of that part of the mind's history, without a reference to its relation to matter, would infallibly be found vague, imperfect, and false.—Let it suffice then to add here, that man is what he is in fact, and what he is designed to be in the present life, only by means of this connection. He cannot free himself from it, if he would; and if he should succeed in the attempt, it would only result in self prostration and imbecility. The forms of matter, operating through the senses, press, as it were, on the soul's secret power of harmony, and it sends forth the answer of its thought and feeling. The material creation, where Providence has fixed our dwelling place, and this earthly tenement of our bodies form the first scene of the mind's developement, the first theatre of its exercises, where it puts forth and enacts the incipient part in the great drama of its struggles, growth, and triumphs.

CHAPTER SECOND.

SENSATION AND PERCEPTION.

§. 157. *Sensation a simple mental state originating in the senses.*

IN tracing the history of that portion of human thought, which is of external origin, we have frequent occasion to make use of the words Sensation and Perception. The term SENSATION is not of so general a nature as to include every variety of mental state, but is limited to such as answer to a particular description. It does not appear, that the usage of language would forbid our speaking of the feelings of warmth and coldness and hardness, as well as of the feelings of love and benevolence and anger, but it would clearly forbid our using the term SENSATION with an application equally extensive. Its application is not only limited, but is fixed with a considerable degree of precision.

Sensation, being a simple act or state of the mind, is unsusceptible of definition; and this is one of its characteristics. As this alone, however, would not separate it from many other mental states, it has this peculiarity to distinguish it, that it is immediately successive to a change in some organ of sense, or at least to a bodily change of some kind. But it is evident, that in respect to numerous other feelings this statement does not hold good. They are immediately subsequent, not to bodily impressions, but to other states of the soul itself. Hence it is, that while

we speak of the sensations of heat and cold, hardness, extension, and the like, we do not commonly apply this term to joy and sorrow, hatred and love, and other emotions and passions.

§. 158. *All sensation is properly and truly in the mind.*

Sensation is often regarded as something having a position, and as taking place in the body, and particularly in the organ of sense. The sensation of touch, as we seem to imagine, is in the hand, which is the organ of touch, and is not truly internal; the hearing is in the ear, and the vision in the eye, and not in the soul. But it will at once occur, that this supposition, however widely and generally it may be made, is altogether at variance with those essential notions, which we have found it necessary to form of matter. If the matter of the hand, of the eye, or ear, can have feeling in any degree whatever, there is no difficulty in the supposition, that the matter of the brain, or any other material substance can put forth the exercises and functions of thought. But after what has been already said on the subject of the mind's immateriality, this supposition is altogether inadmissible. All we can say with truth and on good grounds is, that the organs of sense are accessory to sensation and necessary to it, but the sensation or feeling itself is wholly in the mind. How often it is said the eye sees; but the proper language is the soul sees, for the eye is only the organ, instrument, or minister of the soul in visual perceptions.

"A man, (says Dr. Reid,) cannot see the satellites of Jupiter but by a telescope. Does he conclude from this, that it is the telescope, that sees those stars? By no means; such a conclusion would be absurd. It is no less absurd to conclude, that it is the eye that sees, or the ear that hears. The telescope is an artificial organ of sight, but it sees not. The eye is a natural organ of sight, by which we see; but the natural organ sees as little as the artificial."

Among other things, illustrative of the correctness of what has been said, there is this consideration also. The

opinion, that sensation is in the organ or some other material part and not in the soul, is inconsistent with the fundamental and indisputable doctrine of mental identity. "When I say, I see, I hear, I feel, (says the same judicious author,) this implies, that it is one and the same self, that performs all these operations. And as it would be absurd to say that my memory, another man's imagination, and a third man's reason may make one individual intelligent being ; it would be equally absurd to say, that one piece of matter seeing, another hearing, and a third feeling, may make one and the same percipient being."*

Although the opinion, that sensation is not in the mind but in the body, is unfounded, it is perhaps not surprising, that such a belief should have arisen. If the hand be palsied, there is no sensation of touch ; if the ear be stopped, there is no sensation of hearing ; if the eye be closed, there is no vision ; hence it happens that when we have these sensations, we are led to think of the organ or part of the bodily system, with the origin of which they are connected. When we feel a pain arising from an external cause, it is a natural, and often a useful curiosity, which endeavours to learn the particular place in the body, which is affected. This, which we are generally able to ascertain, always arrests our attention more or less. In this way we gradually form a very strong association ; and almost unconsciously transfer the place of the inward sensation to that outward part, with which we have so frequently connected it in our thoughts. Although this is clearly a mere fallacy, the circumstance of its being a plausible and tenacious one renders it the more necessary to guard against it.

§. 159. *Sensations are not images or resemblances &c. of objects.*

But while we are careful to assign sensations their true place in the mind, and to look upon what is outward in the body as merely the antecedents or causes of them, it

* Reil's Intellectual Powers, Essay II.

is a matter of some consequence to guard against a danger directly the reverse of that, which has been remarked on. We are apt to transfer to the sensation, considered as existing in the mind, some of those qualities, which belong to the external object. But in point of fact our sensations are by no means copies, pictures, or images of outward objects; nor are they representations of them in any material sense whatever; nor do they possess any of their qualities.

It is true, we often think it otherwise; constantly occupied with external objects, when in the act of contemplation we retire within the mind, we unwarily carry with us the form and qualities of matter, and stamp its likeness on the thought itself. But the thought, whatever it may be by the constitution of our nature be the sign of, has no form, and presents no image analogous to what are outwardly objects of touch and sight; nor has it form or image in any sense, which we can conceive of. When, therefore, we have an idea of some object as round, we are not to infer from the existence of the quality in the outward object, that the mental state is possessed of the same quality; when we think of any thing as extended, it is not to be supposed, that the thought itself has extension; when we behold and admire the varieties of colour, we are not at liberty to indulge the presumption, that the inward feelings are painted over, and radiant with corresponding hues. There is nothing of the kind, and the admission of such a principle would lead to a multitude of errors.

This subject is illustrated in the following manner by Dr. Reid, whom we have already had repeated occasion to refer to on the subject before us.—“Pressing my hand with force against the table, I feel pain, and I feel the table to be hard. The pain is a sensation of the mind, and there is nothing that resembles it in the table. The hardness is in the table, nor is there any thing, resembling it in the mind. Feeling is applied to both; but in a different sense; being a word common to the act of sensation, and to that of perceiving by the sense of touch.

“I touch the table gently with my hand, and I feel it to be smooth, hard, and cold. These are qualities of the table perceived by touch ; but I perceive them by means of a sensation which indicates them. This sensation not being painful, I commonly give no attention to it. It carries my thought immediately to the thing signified by it, and is itself forgotten, as if it had never been. But by repeating it, and turning my attention to it, and abstracting my thought from the thing signified by it, I find it to be merely a sensation, and that it has no similitude to the hardness, smoothness, or coldness of the table which are signified by it.

“It is indeed difficult, at first, to disjoin things in our attention which have always been conjoined, and to make that an object of reflection which never was so before ; but some pains and practice will overcome this difficulty in those, who have got the habit of reflecting on the operations of their own minds.”*

§. 160. The connection between the mental and physical changes not capable of explanation.

External bodies operate on the senses, before there is any affection of the mind, but it is not easy to say what the precise character and extent of this operation is. We know, that some object capable of affecting the organ must be applied to it in some way either directly or indirectly, and it is a matter of knowledge also, that some change in the organ actually takes place ; but further than this, we are involved in uncertainty. All we can undertake to do at present is the mere statement of the facts, viz, the application of an external body, and some change in consequence of it in the organ of sense.

Subsequently to the change in the organ, either at its extremity and outward developement or in the brain, with which it is connected, and of which it may be considered as making a part, a change in the mind or a new state of the mind immediately takes place. Here also we

* Reid's Intellectual Powers, Essay II.

are limited to the mere statement of the fact. We here touch upon one of those boundaries of the intellect, which men are probably not destined to pass in the present life. We find ourselves unable to resolve and explain the connection between mind and matter in this case, as we do in all others. All we know, and all we can state with confidence is, that a mental affection is immediately subsequent to an affection or change, which is physical. Such is our nature, and such the appointment of Him who ordered it.

§. 161. *Of the meaning and nature of Perception.*

We next come to the subject of PERCEPTION, which is intimately connected with that of sensation. This term like many others admits of considerable latitude in its application. In common language we are not only said to have the power of perceiving outward objects, but also of perceiving the agreement or disagreement in the acts of the mind itself. Accordingly we perceive a tree in the forest or a ship at sea, and we also perceive, that the whole is greater than a part, and that the three angles of a triangle are equal to two right angles. But what we have to say here does not concern internal perception, but merely that, which relates to objects exterior to the mind.

Perception, using the term in its application to outward objects, differs from sensation, as a whole does from a part ; it embraces more. It may be defined, therefore, an affection or state of the mind, which is immediately successive to certain affections of the organs of sense, and which is referred by us to something external as its cause.

It will be recollected, that the term SENSATION, when applied to the mind, expresses merely the state of the mind without reference to any thing external, which might be the cause of it, and that it is the name of a truly simple feeling. Perception on the contrary is the name of a complex mental state, including not merely the internal affection of the mind, but also a reference to the

exterior cause. Sensation is wholly within ; but Perception carries us, as it were, out of ourselves, and makes us acquainted with the world around us. It is especially by means of this last power, that material nature, in all its varieties of form and beauty, is brought within the range of our inspection. If we had but sensation alone, there would still be form and fragrance, and colour, and harmony of sound, but it would seem to be wholly inward. The mind would then become not merely what Leibnitz supposed it to be, a mirror of the universe ; it would be the universe itself ; we could know no other world, no other form of being. Perception prevents the possibility of such a mistake ; it undeceives and dissipates the flattering notion, that all things are in the soul ; it leads us to other existences, and in particular to the knowledge of the vast and complicated fabric of the material creation.

§. 162. *Of the primary and secondary qualities of matter.*

From what has been said, it will be noticed, that SENSATION implies the existence of an external material world as its cause, and that PERCEPTION implies the same existence both as cause and object. As, therefore, the material world comes now so directly and closely under consideration, it seems proper briefly to revert to that subject. It is hardly necessary to repeat the sentiment, which has already been proposed and insisted on, that we are altogether ignorant of the subjective or real essence of matter. Our knowledge embraces merely its qualities or properties, and nothing more. Without proposing to enter into a minute examination of them, it will be proper to recall to recollection here, that the qualities of material bodies have been ranked by writers under the two heads of Primary and Secondary.

The PRIMARY QUALITIES are known by being essential to the existence of all bodies. They are extension, figure, divisibility, and solidity ; and some writers have included motion. They are called PRIMARY for the reason already

distinctly referred to, that all men embrace them in the notions, which they form of matter, and that they are essential to its existence. All bodies have extension, all bodies have figure, all are capable of division, all possess the attribute of solidity.

By **SOLIDITY** in bodies, (perhaps some would prefer the term **RESISTANCE**,) is to be understood that quality, by which a body hinders the approach of others, between which it is interposed. In this sense even water, and all other fluids are solid. If particles of water could be prevented from separating, they would oppose so great resistance, that it would be impossible for any two bodies, between which they might be, to come in contact. This was shown in an experiment, which was once made at Florence. A quantity of water was enclosed in a gold ball, which on the most violent pressure could not be made to fill the internal cavity, until the water inside was forced through the pores.

There is reason also for that part of the arrangement, which includes **DIVISIBILITY**. We cannot conceive of a particle so small as not to be susceptible of division. And to that small particle must belong not only divisibility, but the qualities of solidity, extension, and figure.

§. 163. *Of the secondary qualities of matter.*

The **SECONDARY** qualities of bodies are of two kinds ; (1) Those, which have relation to the perceiving and sentient mind ; (2) Those, which have relation to other bodies.

Under the first class are to be included sound, colour, taste, smell, hardness and softness, heat and cold, roughness and smoothness, &c. When we say of a body it has sound, we imply in this remark, that it possesses qualities, which will cause certain effects in the mind; the term sound being applicable by the use of language both to the qualities of the external object, and to the effect produced within. When we say it has colour, we always make a like reference to the mind, which beholds and

contemplates it ; and it is the same of the other secondary qualities of this description.

The other class of secondary qualities, (or properties as they are not unfrequently termed,) those which have relation to other material bodies, are exceedingly various and numerous. The material substance, which in relation to the mind possesses the qualities of sound and colour, may possess also in relation to other bodies the qualities or properties of malleability, fusibility, solubility, permeability, and the like.

§. 164. *Of the nature of mental powers or faculties.*

We have spoken of Perception as a POWER of the mind, as well as a mental state or act. This is owing to the imperfection of language. The same term, at least in the English language, signifies both the result, and the corresponding power; and oftentimes there is nothing but the connection to determine which is meant. But we have recurred to this subject here, merely for the purpose of suggesting the importance of keeping in recollection, that mental powers, (what are otherwise called faculties and not unfrequently susceptibilities,) are not distinct from the mind itself. They are only the ability of the mind to act in a particular way. We apply the term also in other cases ; we speak of the power or faculty of the MEMORY, of REASONING, of IMAGINATION, &c. Such expressions are found in all languages, and cannot well be avoided. They are brief, and, on the whole, convenient representations of the various ways, in which the soul is capable of acting, or exerting itself.

But while we keep in recollection, that powers or faculties are only the ability of the mind to act in a particular way, it is further to be noticed, that in most cases what are so called are complex in their nature; they are made up in their results of various simple feelings, and imply the exercise of more than one simple susceptibility. It is proper, therefore, to analyze them, and to become acquainted with their parts ; otherwise our notions will be confused, and often erroneous. Still ; we cannot

wholly lay aside the expressions, which use and the wants of men have introduced ; nor is this necessary, if we will but take the pains to explain the true nature of the operations, and of that ability of the mind, which they profess to represent. If philosophers should undertake to introduce a whole new system of terms, (and the credit is due to Kant that there is not wanting a notable instance of this in modern times,) still it would be necessary to employ the old ones, in order to make them understood by mankind generally. As a general rule it is better to employ the common and acknowledged phraseology, only taking care to limit and explain it so far as it may be liable to misapprehension in consequence of a new and scientific application. “ It looks too much like affectation, (says Locke, speaking of these forms of speech,) wholly to lay them by ; and philosophy itself, though it likes not a gaudy dress, yet when it appears in public, must have so much complacency, as to be clothed in the ordinary fashion and language of the country, so far as it can consist with truth and perspicuity.”

CHAPTER THIRD.

THE SENSES OF SMELL AND TASTE.

§. 165. *Nature and importance of the senses as a source of knowledge.*

It is desirable to keep clearly in the mind the precise relation of the senses to the origin, progress, and amount of our knowledge, and to possess if possible a correct understanding of their true value. In a certain sense the possession of the bodily organs, with which we are furnished, is not essential and pre-requisite to the possession of that knowledge, which we are accustomed to ascribe to them. There is nothing unwarrantable and unreasonable in the supposition, that the knowledge, which we now have by their means, might have been possessed without their aid, either immediately, or in some way altogether different. Their use and indispensableness in the acquisition of a certain portion of what men are permitted to know; is a matter of arrangement and appointment on the part of our Maker. It is undoubtedly an evidence of the correctness of this remark, that the Supreme Being has a full acquaintance with all those outward objects, which present themselves to our notice, without being indebted to any material instrumentality and mediation. He perceives in another way, or rather all knowledge is

inherent in, and originally and unalterably essential to himself.

It is not so, as we have reason to believe, with any other beings, and certainly not with man. Although a great part of his knowledge relates to material things, he is so formed, and his constitution is so ordered, that he is wholly dependent for it on the senses.—Deprive him of the ear, and all nature becomes voiceless and silent ; deprive him of the eye, and the sun and moon withdraw their light, and the universe becomes darkened like sack-cloth ; deprive him of the sense of touch, and he is then entirely insulated, and as much cut off from all communication with others, as if he were the only being in existence.

§. 166. *Of the connection of the brain with sensation and perception.*

It may perhaps be asked, Whether these views are intended to exclude the brain, as having a connection with the senses in the results, which are here ascribed to them ? And this inquiry leads us to observe, (what has been before alluded to,) that the brain is a prominent organ in the material part of the process of sensation and of external perception. The senses evidently cannot be separated from the nervous system. But the substance, which is found in the nerves, excepting the coat in which it is enveloped, is the same as in the brain, being of the same soft and fibrous texture, and in continuity with it. As a general statement, when the brain has been in any way injured, the inward sensation, which would otherwise be distinct on the presence of an external body, is imperfect. Also if the nerve be injured, or if its continuity be disturbed by the pressure of a tight ligature, the effect is the same ; a circumstance which goes to confirm the alleged identity of substance in the two.

The brain, therefore, and whatever of the same substance is in continuity with it, particularly the nerves, constitute the *sensorial organ*, which, in the subordinate organs of taste, smell, sight, touch, and hearing presents it-

self under different modifications to external objects. On this organ, the *sensorial*, as thus explained, an impression must be made, before there can be sensation and perception.

• An impression, for instance, is made on that part of the *sensorial* organ called the auditory nerve, and a state of mind immediately succeeds, which is variously termed, according to the view in which it is contemplated, either the sensation, or the perception of sound.

An impression is made by the rays of light on that expansion of the optic nerve, which forms what is called the *RETINA* of the eye, and the intellectual principle is immediately brought into that new position, which is termed visual perception or a perception of sight.

The hand is impressed on a body of an uneven and rough surface, and immediately consequent on this application and pressure, is that state of mind, which is termed a sensation or perception of roughness.

§. 167. *Order in which the senses are to be considered.*

In considering those ideas, which we become possessed of by means of the senses, it is natural to begin with that sense, which will cause us the least difficulty in the analysis of its results; and to proceed to others successively, as we find them increasing in importance. It may not be altogether easy to apply this principle with strictness, but it will answer all the purpose, for which it is here introduced, if we consider the senses in the following order, the smell, taste, hearing, touch, and sight.

• The mind holds a communication with the material world by means of the sense of smelling. All animal and vegetable bodies, (and the same will probably hold good of other bodies, though generally in a less degree,) are continually sending out effluvia of great subtilty. These small particles are rapidly and widely scattered abroad in the neighbourhood of the body, from which they proceed. No sentient being can come within the circumference, occupied by these continually moving and volatile atoms, without experiencing effects from it.

§. 168. *Of the sense and sensations of smell.*

The medium, through which we have the sensations and perceptions of smell, is the organ, which is termed the olfactory nerve, situated principally in the nostrils, but partly in some continuous cavities. When any odoriferous particles, sent from external objects, affect this organ, there is a certain state of mind produced, which varies with the nature of the odoriferous bodies. But we can no more infer from the sensation itself merely, that there exists any necessary connection between the smell and the external objects, than that there exists a connection between the emotions of joy and sorrow and the same objects. It might indeed be suggested to us by the change in our mental states, that there must be some cause or antecedent to the change, but this suggestion would be far from implying the necessity of a *corporeal* cause.

How then does it happen, that we are not merely sensible of the particular sensation, but refer it at once to some external object, to the rose or the honeysuckle? In answer it may be remarked, if we had always been destitute of the senses of sight and touch, this reference never could have been made, but having been furnished with them by the beneficent Author of our being, we make this reference by experience. When we have seen the rose, when we have been near to it and handled it, we have uniformly been conscious of that state of mind, which we term a sensation of smell. When we have come into the neighbourhood of the honeysuckle, or when it has been gathered and presented to us, we have been reminded of its fragrance. And thus, having learnt by experience, that the presence of the odoriferous body is always attended with the sensations of smell, we form the habit of attributing the sensations to that body as their cause.

§. 169. *Of perceptions of smell in distinction from sensations.*

The mental reference, spoken of in the last section, is

made with almost as much promptness, as if it were necessarily involved in the sensation itself. It is at least so rapid, that we find ourselves utterly unable to mark the mind's progress from the inward feeling to the conception of the outward cause. Nor is this inability surprizing, when we consider, that we have repeated this process, both in this and in analogous cases, from our earliest childhood. No object has ever been present to us, capable of operating on the senses, where this process has not been gone through. The result of this long-continued and frequent repetition has been an astonishing quickness in the mental action; so much so that the mind leaps outward with the rapidity of lightning, to be present with, and to comprehend the causes of the feeling within.

This view, it will be seen, helps in illustrating the nature of PERCEPTION, as distinguished from sensation. The outlines of that distinction have already been given; and every one of the senses, as well as that now under consideration, will furnish proofs and illustrations of it. Accordingly when we are said to perceive the smell, or to have perceptions of the smell of a body, the rapid process, which has been described, is gone through, and the three things, which were involved in the definition of Perception already given, are supposed to exist; (1) The presence of the odoriferous body and the affection of its appropriate organ; (2) The change or sensation in the mind; and (3) The reference of the sensation to the external body as its cause.

§. 170. *Of the sense and the sensations of taste.*

The tongue, which is covered with numerous nervous papillae, forms essentially the organ of taste; although the papillae are found scattered in other parts of the cavity of the mouth. The application of any rapid body to this organ immediately causes in it a change or affection; and this is at once followed by a mental affection or a new state of the mind. In this way we have the sensations and perceptions, to which we give the names, sweet, bitter, sour, acrid, &c.

Having experienced the inward sensation, the affections of the mind are then referred by us to something external as their cause. We do not however always, nor even generally distinguish the qualities, which constitute this cause, by separate and appropriate designations; but express them by the names, that are employed for the internal feeling, viz, sweetness, bitterness, sourness, &c. This reference of what is internally experienced to its external cause, is very rapidly made; so that we at once say of one apple it is sweet, and of another it is sour. Still it is to be kept in mind, that, in point of fact, it is subsequent, both in the order of nature and of time, to the taste sensation; although we may not be able, in consequence of its rapidity, to mark distinctly the progress of the mental action from the one to the other. As in the case of smells, which have already been remarked upon, the reference is the result of our former experience. We say of one body, it is sweet, and of another, it is sour, because we have ever observed, that the mental states, indicated by those terms, have always existed in connection with the presence of those bodies.

Whenever, therefore, we say of any bodies, that they are sweet, bitter, sour, or apply any other epithets, expressive of sapid qualities, we mean to be understood to say, that such bodies are fitted in the constitution of things to cause in the mind the sensations of sweetness, bitterness, and sourness, or other sensations, expressed by denominations of taste. Or, in other words, that they are the established antecedents of such mental states, as there is, further than this, no necessary connection between them.

§. 171. *Design and uses of the senses of smell and taste.*

It is not unprofitable to delay oftentimes, and contemplate the designs and uses, which nature has in view in her works. Although the sense of smell may appear, (and perhaps with sufficient reason,) to be of less importance, than the other senses, and other parts of the animal economy, it is not without its ends. There is evidently design in

the position of the organ in reference to the effluvia, which are the direct subjects of its action, it being placed in the inside of a canal, where the air is continually forced in and out with every breath we draw. The organ is precisely adapted, both in its nature and its place, to its appointed medium of communication with other bodies; nor is this the only mark of design attending it. This sense is frequently a source of gratification; and although it is less keen and powerful in men than in many inferior animals, it still has power enough to afford much assistance in this respect, that it often warns us of the presence of objects, which experience has found to be injurious to us. The remark has been justly made, that the senses both of taste and smell are of great use in distinguishing bodies, that cannot be distinguished by our other senses. They are peculiarly quick and exact in their judgments, especially in discerning, before we can ascertain it in any other way, the beginning and progress of those changes, which all bodies are constantly undergoing.

But in both of these senses design and utility are discoverable in reference to food in particular. While the sense of smell guards the entrance of the canal for breathing, the sense of taste has its station at the entrance of the alimentary canal. Hence the food, which we consume, undergoes the scrutiny of both; an intentional and benevolent provision for protecting men and the animal creation generally against the introduction of what would be noxious to them.

CHAPTER FOUR.

THE SENSE OF HEARING.

§. 172. *Organ of the sense of hearing.*

Following the order, which has been proposed, we are next to consider the sense of hearing. And in proceeding to the consideration of this subject, the remark is a very obvious one, that we should be unable to hear, if we had not a sense designed for and appropriate to that result. The air, when put strongly in motion, is distinctly perceived by the touch; but no impression, which it could make on that sense, would cause that internal feeling, which is termed a sensation of sound. Our Creator therefore has taken care, that these sensations shall have their own organ; and it is obviously, one of precise and elaborate workmanship. The ear is designedly planted in a position, where with the greatest ease it takes cognizance of whatever is going on in the contiguous atmosphere. When we examine it externally, we not only find it thus favourably situated, but presenting a hollowed and capacious surface, so formed as to grasp and gather in the undulations of air, continually floating and in motion around it. Without, however, delaying to give a minute description of the internal construction of the ear, which belongs rather to the physiologist, it will answer our present purpose merely to add, that these undulations are conducted by it through various windings, till they are

brought in a state of concentration, as it were, against the membrane, called the TYMPANUM. It is worthy of notice, that on the internal surface of this membrane, (the drum as it is popularly called,) there is a nerve spread out in a manner analogous to the expansion of the optic nerve at the bottom of the eye. Whether this nervous expansion be indispensably necessary to the result or not, it is certain that a pressure upon or affection of the tympanum by the external air is followed by a new state of the mind, known as the sensation or perception of sound.

§. 173. *Nature of sonorous bodies and the medium of the communication of sound.*

When we leave the bodily organ, and looking outward inquire still further for the origin of the sensations, which we have by means of the ear, we find them attributable ultimately to the presence and influence of the substances around us. Those undulations of air, which impinge upon the tympanum, and without which there is no sensation of sound, are caused by the vibrations or oscillations of the particles of certain bodies. The material substances which have this quality are termed sonorous, as wood, brass, iron, &c; but it exists in different bodies in very various degrees.

The quality of sonorousness, therefore, in any substance is properly a susceptibility of motion among its own parts. When it is forcibly struck, this motion exists first in itself, and is afterwards communicated to the circumambient air. The movement of the air, which is thus caused, is again communicated, like the concentric waves of water agitated by a stone thrown into it, to other portions successively, till it reaches the ear.

The air accordingly is the medium of communication between the sonorous body, and the tympanum of the ear. It is true, that many solid bodies, are good conductors of sound as well as the atmosphere, but as portions of air, through which the vibratory motion must of course pass, are in all cases interposed between that organ and the sounding body, it is not necessary to dwell upon them

here. It is sufficient for our present purpose merely to understand, that there is in every sounding body in the first place a vibratory motion among its own particles from some cause or other ; that this vibration or undulation is communicated from the sounding body to the air, and from one portion of air to another, till it reaches the organ of hearing. Why the internal sensation should at once follow the completion of this process is another inquiry, which we do not undertake to explain. We have before us the antecedent and the consequent, the affection of the organ of hearing by an outward impulse, and the new mental state within ; but the reason of this invariable connection in two things, that are entirely distinct and different, is a matter beyond our limited comprehension.

§. 174. *Varieties of the sensation of sound.*

The sensations, which we thus become possessed of by the hearing, are far more numerous than the words and the forms of speech, having relation to them in different languages, would lead us to suppose. It will help to illustrate this subject, if we recur a moment to the sense of TASTE. The remark has somewhere been made to this effect, and probably with much truth, that if a person were to examine five hundred different wines, he would hardly find two of them of precisely the same flavour. The diversity is almost endless, although there is no language, which distinguishes each variety of taste by a separate name. It is the same in respect to the sensations of sound. These sensations exhibit the greatest variety, although their differences are too minute to be separately and distinctly represented by language.

These views will appear the less objectionable, when it is remembered, that sounds differ from each other both in the tone, and in the strength of the tone. It is remarked by Dr. Reid, that five hundred variations of tone may be perceived by the ear, also an equal number of variations in the strength of the tone ; making, as he expressly informs us, by a combination of the tones and of the

degrees of strength, more than twenty thousand simple sounds, differing either in tone or strength.

In a perfect tone, a great many undulations of elastic air are required, which must be of equal duration and extent, and follow each other with perfect regularity. Each undulation is made up of the advance and retreat of innumerable particles, whose motions are all uniform in direction, force, and time. Accordingly there will be varieties also and shades of difference in the same tone, arising from the position and manner of striking the sonorous body, from the constitution of the elastic medium, and from the state of the organ of hearing.

Different instruments, such as a flute, a violin, and a bass-viol may all sound the same tone, and yet be easily distinguishable. A considerable number of human voices may sound the same note, and with equal strength, and yet there will be some difference. The same voice, while it maintains the proper distinctions of sound, may yet be varied many ways by sickness or health, youth or age, and other alterations in our bodily condition, to which we are incident.

§. 175. *Manner in which we learn the place of sounds.*

It is a fact particularly worthy of notice in respect to sounds, that we should not know, previous to all experience on the subject, whether a sound came from the right or left, from above or below, from a smaller or a greater distance. And this will appear the less surprizing, when we remember, that the undulations of air are always changed from their original direction by the channels and the windings of the ear, before they strike the tympanum. Abundant facts confirm this statement.

Dr. Reid mentions, that once, as he was lying in bed, having been put into a fright, he heard his own heart beat. He took it to be some one knocking at the door, and arose, and opened the door oftener than once before he discovered, that the sound was in his own breast. Some traveller has related, that when he first heard the roaring of a lion in a desert wilderness, not seeing the animal, he did not

know on what side to apprehend danger, as the sound seemed to him to proceed from the ground, and to enclose a circle, of which he and his companions stood in the centre.

It is by custom or experience, that we learn to distinguish the place of things, and, in some measure also, their nature, by means of their sound. It is thus that we learn, that one noise is in a contiguous room, that another is above our heads, and another is in the street. And what seems to be an evidence of this is, that when we are in a strange place, after all our experience, we very frequently find ourselves mistaken in these respects.

If a man born deaf were suddenly made to hear, he would probably consider his first sensations of sound as originating wholly within himself. But in process of time we learn not only to refer the origin of sounds to a position above or below, to the right or left ; but to connect each particular sound with a particular external cause, referring one to a bell as its appropriate external cause, another to a flute, another to a trumpet.

§. 176. *Application of these views to the art of ventriloquism.*

We are naturally led to make a few remarks here in explanation of VENTRILOQUISM, a well known art, by which persons can so modify their voice, as to make it appear to their audience to proceed from different objects, distances, and directions. The great requisite on the part of the ventriloquist is to be able to mimic sounds ; and he will be likely to succeed nearly in proportion to his skill in this particular. The secret then of his acoustic deceptions, supposing him to be capable of exact imitation, will be sufficiently understood by referring to the statement maintained in the preceding section, viz. That, previous to experience, we are unable to refer sounds to any particular external cause.

The sound itself never gives us any direct and immediate indication of the place, or distance, or direction of the sonorous body. It is only by experience, it is only

by the association of place with sound, that the latter becomes an indication of the former. Now supposing the ventriloquist to possess a delicate ear, which is implied in his ability to mimic sounds, he soon learns by careful observation the difference, which change of place causes in the same sound. Having in this way ascertained the particular modulation of sound, which, in accordance with the experience of men and the associations they have formed, are appropriate to any particular distances, direction, or object, it is evident, whenever he exactly or very nearly imitates such modulations, that the sounds must appear to his audience to come from such distance, object, or direction.

One part of the art, however, consists in controlling the attention of persons present, and in directing that attention to some particular place by a remark, motion, or some other method. If, for instance, the sound is to come from under a tumbler or hat, the performer finds it important to have their attention directed to that particular object, which affords an opportunity for the exercise of all those associations, which they have formed with any sound coming from a very confined place. All, then, that remains for him to do, is, to give his voice a dull modulation and on a low key, which we know from our experience to be the character of confined sounds. Then there seems to be a voice speaking under a tumbler or hat; and if any person should, either intentionally or unintentionally, lift these articles up, the ventriloquist immediately utters himself on a higher key like a person who had been very much confined, on being readmitted into the free and open air. It is also necessary, when his face is towards his auditors, that he should make use chiefly of the muscles of the throat; an outward and visible moving of the lips would much weaken the deception.

§. 177. *Uses of hearing and its connection with oral language.*

Although, as in the cases just mentioned, the artifices of men may sometimes impose upon this organ and lead its decisions astray, it is one, in the ordinary calls for its

exercise, of exceeding value. One of the distinguished benefits of the sense of hearing is, that, in consequence of it, we are enabled to hold intercourse with each other by means of spoken language, without which the advancement of the human mind must have inevitably been very limited. It is by means of speech, that we express our feelings to the little company of our neighbours and our own family ; and without it this pleasant and cheering intercourse must be almost entirely suspended. Not limited in its beneficial results to families and neighbourhoods, it has been made the medium of the transmission of thought from age to age, from generation to generation. So that in one age has been concentrated the result of all the researches, the combination of the wisdom of all the preceeding.

“ There is without all doubt,” it has been observed, “ a chain of the thoughts of human kind, from the origin of the world down to the moment at which we exist, a chain not less universal than that of the generation of every being, that lives. Ages have exerted their influence on ages ; nations on nations ; truths on errors ; errors on truths.”

Whether oral language was an original invention of man, or whether in the first instance it was a power bestowed upon him by his Creator and coeval with the human race, the ear must in either case have been the primary recipient.—The faculty of speech so necessary and so beneficial could not have existed, either by invention or by communication, without the sense of hearing. And hence it happens, that all those, who are born deaf, are without speech. Their inability to speak is not in general the result of a defect in the organs of speech, but because they cannot hear others, and thus imitate the sounds they utter.

CHAPTER FIFTH.

THE SENSE OF TOUCH.

§. 178. *Of the sense of touch and its sensations in general.*

WE are next to consider the sense of TOUCH. The principal organ of this sense is the hand, although it is not limited to that part of our frame, but is diffused over the whole body. The hand principally arrests our attention as the organ of this sense, because being furnished with various articulations, it is easily moveable by the muscles, and can readily adapt itself to the various changes of form in the objects, to which it is applied.

The senses, which have hitherto been examined, are more simple and uniform in their results than that of the touch. By the ear we merely possess that sensation, which we denominate hearing ; we have the knowledge of sounds, and that is all. By the palate we acquire a knowledge of tastes, and by the sense of smelling we become acquainted with the odours of bodies. The knowledge, which is directly acquired by all these senses, is limited to the qualities, which have been mentioned. By the sense of touch, on the contrary, we become acquainted not with one merely, but with a variety of qualities, such as the following, heat and cold, hardness and softness, roughness and smoothness, figure, solidity or resistance, extension, and perhaps motion ; and in particular it gives occasion for the origin of the antecedent and more general notion of externality.

§. 179. The idea of externality or outness suggested by the sense of touch.

If man were possessed of the sense of smell alone, it would be found, that the earliest elements of his knowledge consisted exclusively in sensations of odours. According however as these sensations were agreeable or disagreeable, he would acquire the additional ideas of pleasure and pain. And having experienced pleasure and pain, we may suppose, that this would subsequently give rise to the notions of desire and aversion. But if he had no other sense, all these feelings would seem to him to be internal, to be mere emanations from the soul itself; and he would be incapable of referring them to an external cause.

If he were possessed of the sense of hearing alone, the result would be similar; his existence would then seem to consist of harmony, as in the other case it would be made up of fragrance; nor indeed by the aid of merely both these senses combined, would he be able to form an idea of externality or outness.

But this idea is a most important one; it is the connecting thought, which introduces us to an acquaintance with a new form of existence, different from that interior existence, which we variously call by the names, spirit, mind, or soul. This idea first arises in the mind by means of the sense of touch.

All the senses, not excluding the smell and the taste, which are the least important in a mere intellectual point of view, have their share in bringing the mind into action; they are the primitive sources of thought and of emotion. The mind becomes, in consequence of the aids of the other senses, (supposing ourselves to be as yet without the sense of touch, or at least as not having applied it to any body by means of a muscular effort,) full of activity and fruitfulness, although its acts are at first wholly internal. It compares, abstracts, reasons, chooses, wills; and meeting with no obstacle, it finds every thing easy, and a source of pleasure. But after a time it chooses

to move the limbs in this direction or that ; it chooses to press the hand through this bright or that fragrant body ; and its volition is checked, its desire is counteracted, the wonted series of thoughts is disturbed and broken ; but without even the interval of a momentary pause of wonder, there arises vividly in the soul a new thought, a new feeling, which we call the idea of externality or outness. It is the sense of touch, which impinges, under the ordering of the muscular effort, upon the obstacle that is thrown across the direction of our volition ; and none other of the senses admits of this peculiar application. It is thus the means of breaking up the previous connection and tendency of thought, and gives occasion for the rise of a new idea. And this idea, arising without doubt under these circumstances, becomes associated with all those notions, which we subsequently form of matter.

§. 180. *The idea of externality or outness further considered.*

As this notion is one of much importance, and gives a new character to the great mass of our knowledge by discovering and establishing a multitude of new relations, it is right to delay upon it a moment longer. The circumstances, which have been stated, are properly its occasion. Whenever those circumstances exist, the mind from its own activity at once brings up or suggests it; the moment we come against a resisting object, whether sooner or later, there is a new state of mind, the new feeling in question. This feeling is a definite one, and like all our simple notions has a nature and character of its own ; although, in consequence of its being simple, we cannot make its precise nature known by means of words merely. But that there is such an idea, and that it has such a distinctive character is evinced, not only by every man's consciousness, but by his actions, and by all languages and dialects. It is a matter of course, that it is evinced by consciousness, unless some person can be found firmly believing, that all possible existences are shut up and incorpora-

ted within his own existence. This is evident, because the mere supposition of any thing outward, whatever its character or in whatever degree, necessarily involves the idea of externality.

It is not less clearly evinced by men's actions, unless some person can be found, whose actions are predicated and directed on the basis of the non-existence of the material world. And on this point reference might be made also to all languages. There is probably not a human dialect, that is destitute of what we call in the English tongue **OUTNESS** by a word of Saxon, and at other times **EXTERNALITY** by a word of Latin origin. But it is unreasonable to suppose, that the framers of language would have so generally agreed in forming a term for a mental state which does not generally exist.

§. 181. *Origin of the notions of extension and of the form or figure of bodies.*

The idea of **EXTENSION** has its origin by means of the sense of touch. When the touch is applied to bodies, where in the intermediate parts there is a continuity of the same substance, we necessarily form that notion. It is not however to be imagined, that Extension, as it exists outwardly and the corresponding notion in the mind actually resemble each other. So far from any imitation and copying from one to the other, or resemblance in any way, there is a radical and utter diversity. As to outward, material extension, it is not necessary to attend to it here; our business at present is with the corresponding inward feeling. Nor will it be necessary to delay even upon that; the more we multiply words upon it, the more obscure it becomes. As it is a simple idea we cannot resolve it into others, and in that way make it clearer by defining it. We must refer in this case, as in others like it, to each one's personal experience. It will be better understood in that way, than by any form of words.

The notion of extension is intimately connected with, and may be considered in some sort the foundation of that of the **FORM** or figure of bodies.—Dr. Brown some-

where calls the Form of bodies their relation to each other in space. This is thought to afford matter for reflection ; but when we consider that SPACE, whatever it may be objectively or outwardly, exists in the mind as a simple notion, and that the particular relation here spoken of is not pointed out, the remark may not be found to throw much light on the subject. Still we do not suppose, that any one is ignorant of what FORM is ; men must be supposed to know that, if they are thought to know any thing. All that is meant to be asserted here is, that the idea of extension is antecedent, in the order of nature, to that of form ; and that the latter could not exist without the other ; but that both nevertheless are simple, and both are to be ascribed to the sense of touch.

§. 182. *On the sensations of heat and cold.*

Among the feelings, which are usually classed with the intimations of the sense under consideration, are those, which are connected with changes in the temperature of our bodies. Some writers, it is true, have been inclined to dissent from this arrangement, and have hazarded an opinion, that they ought not to be ascribed to the sense of touch ; but Dr. Reid on the contrary, who gave to our sensations the most careful and patient attention, has decidedly assigned to them this origin. Among other remarks he has expressed himself on this subject to this effect.

“ The words HEAT and COLD, (he remarks, Inquiry into the Human Mind, Chap. V,) have each of them two significations ; they sometimes signify certain sensations of the mind, which can have no existence when they are not felt, nor can exist any where but in the mind or sentient being ; but more frequently they signify a quality in bodies, which, by the laws of nature, occasions the sensations of heat and cold in us: a quality which, though connected by custom so closely with the sensation, that we cannot without difficulty separate them ; yet hath not the least resemblance to it, and may continue to exist when there is no sensation at all.

“ The sensations of heat and cold are perfectly known,

for they neither are, nor can be, any thing else than what we feel them to be; but the qualities in bodies, which we call *heat* and *cold*, are unknown. They are only conceived by us, as unknown causes or occasions of the sensations, to which we give the same names. But though common sense says nothing of the nature of these qualities, it plainly dictates the existence of them; and to deny that there can be heat and cold when they are not felt, is an absurdity too gross to merit confutation. For what could be more absurd, than to say, that the thermometer cannot rise or fall, unless some person be present, or that the coast of Guinea would be as cold as Nova Zembla, if it had no inhabitants.

“It is the business of philosophers to investigate by proper experiments and induction, what heat and cold are in bodies. And whether they make heat a particular element diffused through nature, and accumulated in the heated body, or whether they make it a certain vibration of the parts of the heated body; whether they determine that heat and cold are contrary qualities, as the sensations undoubtedly are contrary, or that heat only is a quality, and cold its privation: these questions are within the province of philosophy; for common sense says nothing on the one side or the other.

“But whatever be the nature of that quality in bodies which we call *heat*, we certainly know this, that it cannot in the least resemble the sensation of heat. It is no less absurd to suppose a likeness between the sensation and the quality, than it would be to suppose, that the pain of the gout resembles a square or a triangle. The simplest man that hath common sense, does not imagine the sensation of heat, or any thing that resembles that sensation, to be in the fire. He only imagines, that there is something in the fire, which makes him and other sentient beings feel heat. Yet as the name of *heat*, in common language, more frequently and more properly signifies this unknown something in the fire, than the sensation occasioned by it, he justly laughs at the philosopher, who denies that there is

any heat in the fire, and thinks that he speaks contrary to common sense."

§. 183. *On the sensations of hardness and softness.*

"Let us next consider, (continues the same writer,) **HARDNESS AND SOFTNESS** ; by which words we always understand real properties or qualities of bodies of which we have a distinct conception.

"When the parts of a body adhere so firmly that it cannot easily be made to change its figure, we call it *hard* ; when its parts are easily displaced, we call it *soft*. This is the notion which all mankind have of hardness and softness : they are neither sensations, nor like any sensation ; they were real qualities before they were perceived by touch, and continue to be so when they are not perceived : for if any man will affirm, that diamonds were not hard till they were handled, who would reason with him?

"There is, no doubt, a sensation by which we perceive a body to be hard or soft. This sensation of hardness may easily be had, by pressing one's hand against a table, and attending to the feeling that ensues, setting aside, as much as possible, all thought of the table and its qualities, or of any external thing. But it is one thing to have the sensation, and another to attend to it and make it a distinct object of reflection. The first is very easy ; the last, in most cases, extremely difficult.

"We are so accustomed to use the sensation as a sign, and to pass immediately to the hardness signified, that, as far as appears, it was never made an object of thought, either by the vulgar, or by philosophers ; nor has it a name in any language. There is no sensation more distinct, or more frequent ; yet it is never attended to, but passes through the mind instantaneously, and serves only to introduce that quality in bodies, which, by a law of our constitution, it suggests.

There are indeed some cases wherein it is no difficult matter to attend to the sensation occasioned by the hardness of a body ; for instance, when it is so violent as to

occasion considerable pain: then nature calls upon us to attend to it; and then we acknowledge that it is a mere sensation, and can only be in a sentient being. If a man runs his head with violence against a pillar, I appeal to him whether the pain he feels resembles the hardness of the stone; or if he can conceive any thing like what he feels to be in an inanimate piece of matter.

“The attention of the mind is here entirely turned toward the painful feeling; and, to speak in the common language of mankind, he feels nothing in the stone, but feels a violent pain in his head. It is quite otherwise when he leans his head gently against the pillar; for then he will tell you that he feels nothing in his head, but feels hardness in the stone. Hath he not a sensation in this case as well as in the other? Undoubtedly he hath; but it is a sensation which nature intended only as a sign of something in the stone; and, accordingly, he instantly fixes his attention upon the thing signified; and cannot, without great difficulty, attend so much to the sensation as to be persuaded that there is any such thing distinct from the hardness it signifies.

“But however difficult it may be to attend to this fugitive sensation, to stop its rapid progress, and to disjoin it from the external quality of hardness, in whose shadow it is apt immediately to hide itself: this is what a philosopher by pains and practice must attain, otherwise it will be impossible for him to reason justly upon this subject, or even to understand what is here advanced. For the last appeal, in subjects of this nature, must be to what a man feels and perceives in his own mind.”

§. 184. *Of certain indefinite feelings sometimes ascribed to the touch.*

In connection with these views on the sensations of touch, it is proper to remark, that certain feelings have been ascribed to that sense, which are probably of a character too indefinite, to admit of a positive and undoubted classification. Although they clearly have their

place, in the general arrangement which has been laid down, with the states of mind which we are now considering ; that is to say, are rather of an external and material, than of an internal origin ; still they do not so evidently admit of an assignment to a particular sense. Those sensations to which we now refer, (if it be proper to use that term in application to them,) appear to have their origin in the human system considered as a whole, made up of bones, flesh, muscles, the senses, &c. rather than to be susceptible of being traced to any particular part. Of this description are the feelings expressed by the terms, uneasiness, weariness, weakness, sickness, and those of an opposite character, as ease, hilarity, health, vigour, &c.

Similar views will be found to apply, in part at least, to the sensations, which we express by the terms HUNGER and THIRST. These appear to be complex in their nature, including a feeling of uneasiness, combined with a desire to relieve that uneasiness. When we say that these views will apply in part to hunger and thirst, the design is to limit the application of them to the element of *uneasiness*. This elementary feeling undoubtedly has its origin in the bodily system, and therefore comes in this case under the general class of notions of an EXTERNAL origin ; but still it is not easy to say, that it should be arranged with our tactual feelings, which has sometimes been done. Every one must be conscious, it is thought, that the feeling of hunger does not greatly resemble the sensations of hardness and softness, roughness or smoothness or other sensations, which are usually ascribed to the touch.—The cause of that peculiar state of the nerves of the stomach, which is antecedent to the uneasy feeling, involved in what is termed hunger, has been a subject of difference of opinion, and does not appear to be well understood. If we were fully acquainted with this, we might perhaps be less at a loss where to arrange the feeling in question.

§. 185. *Relation between the sensation and what is outwardly signified.*

We here return a moment to the subject of the relation between the internal sensation and the outward object; and again repeat, that the mental state and the corresponding outward object are altogether diverse. This view holds good in the case of the secondary, as well as of the primary qualities of matter. Whether we speak of extension, or resistance, or heat, or colour, or roughness, there are, in all cases alike, two things, the internal affection and the outward quality; but they are utterly distinct, totally without likeness to each other. But how it happens that one thing, which is totally different from another, can nevertheless give us a knowledge of that, from which it differs, it would be a waste of time to attempt to explain. Our knowledge is undoubtedly limited to the mere fact.

This is one of those difficult, but decisive points in MENTAL PHILOSOPHY, of which it is essential to possess a precise and correct understanding. The letters, which cover over the page of a book, are a very different thing from the thought, and the combinations of thought, which they stand for. The accountant's columns of numerals are not identical with the quantities and their relations, which they represent. And so in regard to the mind; all its acts are of one kind, and what they stand for is of another. The mind, in all its feelings and operations, is governed by its own laws, and characterizes its efforts by the essential elements of its own nature. Nothing, which is seen or heard, nothing which is the subject of taste or touch or any other sense, nothing material which can be imagined to exist in any place or in any form, can furnish the least positive disclosure either of its intrinsic nature or of the mode of its action.

What then is the relation between the sensation and the outward object, between the perception and the thing perceived? Evidently that of the sign and the thing signified. And as in a multitude of cases, the sign may

give a knowledge of its object without any other grounds of such knowledge than mere institution or appointment, so it is in this. The mind, maintaining its appropriate action, and utterly rejecting the intervention of all images and visible representations, except what are outward and material and totally distinct from itself both in place and nature, is notwithstanding susceptible of the knowledge of things exterior, and can form an acquaintance with the universe of matter.

A misapprehension in this respect, the mistaken supposition of the mind's either receiving actual filmy images from external objects, or being itself transformed into the likeness of such images, has been in times past the source of much confusion and contention. But that opinion, however prevalent it may have been once, is mere hypothesis; it has not the slightest well-founded evidence in its favour. Still we can reject it wholly from our belief, and from all influence on our belief, only by guarding against early associations, by a rigid self-inspection, and by carefully separating the material and the immaterial, the qualities of mind and of matter.

CHAPTER SIXTH

THE SENSE OF SIGHT.

§. 186. *Of the organ of sight and the use or benefit of that sense.*

Of these instruments of external perception, with which a benevolent Providence has favoured us, a high rank must be given to the sense of seeing. If we were restricted in the process of acquiring knowledge to the informations of the touch merely, how many embarrassments would attend our progress and how slow it would prove! Having never possessed sight, it would be many years before the most acute and active person could form an idea of a mountain or even of a large edifice. But by the additional help of the sense of seeing, he not only observes the figure of large buildings, but is in a moment possessed of all the beauties of a wide and variegated landscape.

The organ of this sense is the eye. On a slight examination the eye is found to be a sort of telescope, having its distinct parts, and discovering throughout the most exquisite construction. The medium, on which this organ acts, are rays of light, every-where diffused, and always advancing, if they meet with no opposition, in direct lines. The eye like all the other senses not only receives externally the medium, on which it acts; but carries the rays of light into itself; and on principles purely scientific refracts and combines them anew.

It does not however fall within our plan to give a mi-

mere description of the eye, which belongs rather to the anatomist ; but such a description, with the statement of the uses of the different parts of the organ, must be to a candid and reflecting mind a most powerful argument in proof of the existence and goodness of the Supreme Being. How wonderful among other things is the adaptation of the rays of light to the eye? If these rays were not of a texture extremely small, they would cause much pain to the organ of vision, into which they so rapidly pass. If they were not capable of exciting within us the sensations of colour, we should be deprived of much of that high satisfaction, which we now take in beholding surrounding objects ; showing forth, wherever they are to be found, the greatest variety and the utmost richness of tints.

§. 187. *Statement of the mode or process in visual perception.*

In the process of vision, the rays of light, coming from various objects and in various directions, strike in the first place on the pellucid or transparent part of the ball of the eye.

If they were to continue passing on precisely in the same direction, they would produce merely one mingled and indistinct expanse of colour. In their progress however through the chrystalline humour, they are refracted or bent from their former direction, and are distributed to certain focal points on the retina, which is a white, fibrous expansion of the optic nerve.

The rays of light, coming from objects in the field of vision, whether it be more or less extensive, as soon as they have been distributed on their distinct portions of the retina, and have formed an image there, are immediately followed by the sensation or perception, which is termed sight. The image, which is thus pictured on the retina, is the last step, which we are able to designate in the material part of the process in visual perception ; the mental state follows, but it is not in our power to trace, even in the smallest degree, any physical connection between the optical image and the corresponding state of

the mind.——All that we can say in this case is, that we suppose them to hold to each other the relation of antecedent and consequent by an ultimate law of our constitution.

§. 188. *Of the original and acquired perceptions of sight.*

In speaking of those sensations and perceptions, the origin of which is generally attributed to the sense of sight, it is necessary to make a distinction between those, which are ORIGINAL, and those which are ACQUIRED. Nothing is properly original with the sense of sight but the sensations of colours, as red, blue, white, yellow, &c. These sensations, (or perceptions, as they are otherwise called, when the internal feeling is combined with a reference to the external cause,) are exceedingly numerous. In this respect the intimations of the sense of sight stand on the same footing with those of the taste and hearing; although distinctive names, in consequence of the difficulty of accurately separating and drawing the line between each, are given only in a few cases. All the sensations of colour are original with the sight; and are not to be ascribed to any other sense.

A part however of that knowledge, which we attribute to the sight, and which has the appearance of being immediate and original in that sense, is not so. Some of its alleged perceptions are properly the results of sensations, combined not only with the usual reference to an external cause, but with various other acts of the judgment. In some cases the combination of the acts of the judgment with the visual sensation is carried so far, that there is a sort of transfer to the sight of the knowledge, which has been obtained from some other source. And not unfrequently, in consequence of a long and tenacious association, we are apt to look upon the knowledge thus acquired, as truly original with the seeing power. This will suffice perhaps as a statement of the general fact, while the brief examination of a few instances will help to the more thorough understanding of those acquired perceptions of the sight, which are here referred to.

§. 189. *The idea of extension not originally from sight.*

It is well known that there is nothing more common than for a person to say, that he sees the length or breadth of any external object ; that he sees its extent, &c. These expressions appear to imply, (and undoubtedly are so understood,) that extension is a direct object of sight. There is no question, that such is the common sentiment, and that the outlines and surface of bodies, which they permanently expand, are supposed to be truly seen. An opinion different from this might even incur the charge of great absurdity.

But properly the notion of extension, as we have already seen, has its origin in the sense of touch. Being a simple and elementary thought, it is not susceptible of definition; nor, when we consider it as existing outwardly and materially, can we make it a matter of description without running into the confusion of using synonymous words. But whatever it is, (and certainly there can be neither ignorance nor disagreement on that point, however much language may fail of conveying our knowledge of it,) it is not to be ascribed to the sight.

The notion of extension is closely connected with externality. It is not possible to form the idea of extension from mere consciousness, or a reflection on what takes place within us. But making a muscular effort, and thus applying the touch to some resisting body, we first have the notion of outness ; and either from the same application of that sense, or when we have repeated it continuously on the same surface, we have the additional notion of its being extended or spread out. If a man were fixed immoveably in one place, capable of smelling, tasting, hearing, and seeing, but without tactual impressions originating from a resisting body, he would never possess a knowledge of either. Having first gained that knowledge from the touch in the way just mentioned, he learns in time what appearance extended bodies, which are of course coloured, make to the eye. At a very early period, having ascertained that all coloured bodies are spread

out or extended, he invariably associates the idea of extension with that coloured appearance. Hence he virtually and practically transfers the knowledge obtained by one sense to another ; and even after a time imagines extension to be a direct object of sight, when in fact what is seen is only a sign of it, and merely suggests it. An affection of the sense of touch is the true and original occasion of the origin of this notion ; and it becomes an idea of sight only by acquisition or transference.

§. 190. *Of the knowledge of the figure of bodies by the sight.*

Views similar to those, which have been already advanced, will evidently apply to the figure of bodies. We acquire a knowledge of the figure or form of bodies originally by the sense of touch. But it cannot be doubted, that this knowledge is often confidently attributed to the sense of sight as well as the touch. Although there is reason to believe, that men labour under a mistake in this, it is not strange, when we trace back our mental history to its earlier periods, that such a misapprehension should exist.

A solid body presents to the eye nothing but a certain disposition of colours and light. We may imagine ourselves to see the prominencies or cavities in such bodies, when in truth we see only the light or the shade, occasioned by them. This light and shade, however, we learn by experience to consider as the sign of a certain solid figure.

A proof of the truth of this statement is, that a painter by carefully imitating the distribution of light and shade, which he sees in objects, will make his work very naturally and exactly represent not only the general outline of a body, but its prominencies, depressions, and other irregularities. And yet his delineation, which by the distribution of light and shade gives such various representations, is on a smooth and plain surface.

It was a problem submitted by Mr. Molyneux to Mr. Locke, whether a blind man, who has learnt the difference between a cube and a sphere by the touch, can, on

being suddenly restored to sight, distinguish between them, and tell, which is the sphere and which is the cube, by the aid of what may be called his *new sense* merely? And the answer of Mr. Locke was, in agreement with the opinion of Molyneux himself, that he cannot. The blind man knows what impressions the cube and sphere make on the organ of touch, and by that sense is able to distinguish between them; but, as he is ignorant what impression they will make on the organ of sight, he is not able by the latter sense alone to tell, which is the round body, and which is the cubic.*

It was remarked, that solid bodies present to the eye nothing but a certain disposition of light and colours.—It seems to follow from this, that the first idea, which will be conveyed to the mind on seeing a globe, will be that of a circle, variously shadowed with different degrees of light. This imperfect idea is corrected in this way.

* Mr. Molyneux was an eminent mathematician of the city of Dublin, the correspondent and particular friend of Mr. Locke. The letter, in which he introduces the subject referred to in the text, is dated, Dublin, March 2, 1693, in the concluding part as follows.—I will conclude my tedious lines with a jocosè problem as follows, that, upon discourse with several, concerning your book and notions, I have proposed to divers very ingenious men, and could hardly ever meet with one, that, at first dash, would give me the answer to it, which I think true, till by hearing my reasons they were convinced. It is this.

Suppose a man born blind and now adult, and taught by his touch to distinguish between a cube and a sphere, (suppose of ivory,) nighly of the same bigness, so as to tell, when he felt one and the other, which is the cube, which the sphere. Suppose then the cube and sphere placed on a table, and the blind man be made to see. *QUEST*, Whether, by the sight, before he touched them, he could now distinguish and tell, which is the globe, which the cube? I answer not; for though he has obtained the experience of how a globe, and how a cube affects his touch, yet he has not yet attained the experience, that what affects his touch so or so, must affect his sight so or so, or that a protuberant angle in the cube, that pressed his hand unequally, shall appear to his eye as it does in the cube.—Mr. Locke says in his answer, that this ingenious problem deserves to be published to the world, which was accordingly done in a subsequent edition of the *Essay on the Understanding*, (Bk. II, ch. IX,) accompanied by some remarks of his own.

Combining the suggestions of the sense of touch with those of sight, we learn by greater experience what kind of appearance solid, convex bodies will make to us. That appearance becomes to the mind the sign of the presence of a globe; so that we have an idea of a round body by a very rapid mental correction, whereas the notion first conveyed to the mind is truly that of a plane, circular surface, on which there is a variety in the dispositions of light and shade. It is an evidence of the correctness of this statement, that in paintings plane surfaces, variously shaded, represent convex bodies, and with great truth and exactness.

It appears then, that extension and figure are originally perceived, not by sight, but by touch. We do not judge of them by sight, until we have learnt by our experience, that certain visible appearances always accompany and signify the existence of extension, and of figure. This knowledge we acquire at a very early period in life, so much so, that we lose in a great measure the memory both of its commencement and progress.

§. 191. *Measurements of magnitude by the eye.*

What has been said naturally leads us to the consideration of **MAGNITUDE**. This is a general term for Extension, when we conceive of it not only as limited or bounded, but as related to and compared with other objects. Although we make use of the eye in judging of it, it is to be kept in mind, that the knowledge of magnitude is not an original intimation of the sight, but is at first acquired by the aid of touch. So well known is this, that it has been common to consider Magnitude under the two heads of tangible or real, and visible or apparent; the tangible magnitude being always the same, but the visible varying with the distance of the object. A man of six feet stature is always that height, whether he be a mile distant, or half a mile, or near at hand; the change of place making no change in his real or tangible magnitude. But the visible or apparent magnitude of this man may be six feet or not one foot, as we view him present with us and

immediately in our neighbourhood, or at two miles' distance; for his magnitude appears to our eye greater or less, according as he is more or less removed.—Hence the general principle, that of two objects equally distant, that, which has the greatest visible magnitude, is supposed to have the greatest tangible magnitude.

Among the multitude of instances, which might be adduced in illustration of this principle, the following statement to be found in the seventh number of the Edinburgh Journal of Science, is a striking one. In examining a dioramic representation of the inside of Rochester cathedral, which produced the finest effect from the entire exclusion of all extraneous light and of all objects, excepting those on the picture itself, the writer of the statement referred to was struck with an appearance of distortion in the perspective, which he ascribed to the canvass not hanging vertically. Upon mentioning this to the gentleman, who exhibited the picture, he offered to walk in front of it, and strike its surface with the palm of his hand, to show that the canvass was freely suspended. Upon doing this, a very remarkable deception, or illusion rather, took place. As his hand passed along, it gradually became larger and larger, till it reached the middle, when it became enormously large. It then diminished, till it reached the other end of the canvass.

As the hand moved towards the middle of the picture, it touched the parts of the picture more and more remote from the eye of the observer; and consequently the mind referred the hand and the object in contact with it to the same remote distance; and consequently gave it a fictitious magnitude, corresponding with the visible figure it presented, combined with the supposition of its being placed at a distance. (See Edin. Journ. of Science, No. VII, p. 90, and Art. Science, Edin. Ency.)

§. 192. *Of objects seen in the mist and of the sun and moon in the horizon.*

In accordance with the above mentioned principle it happens, that objects, seen by a person in a mist, seem

larger than the life.. Their faint appearance rapidly conveys to the mind the idea of being considerably removed although they are actually near to us. And the mind immediately draws the conclusion, (so rapidly as to seem a simple and original perception,) that the object, having the same visible or apparent magnitude, and yet supposed to be at a considerable distance, is greater than other objects of the same class. So that it is chiefly the view of the mind, a law or habit of the intellect, which in this particular case gives a fictitious expansion to bodies; although it is possible, that the result may in part be attributed to a difference in the refraction of the rays of light, caused by their passing through a denser and less uniform medium than usual.

These remarks naturally remind us of the well known fact, that the sun and moon seem larger in the horizon than in the meridian. Two reasons may be given for this appearance; and perhaps ordinarily they are combined together.—(1) The horizon may seem more distant than the zenith, in consequence of intervening objects. We measure the distance of objects in part by means of those that are scattered along between, and any expanse of surface, where there are no such intervening objects, appears to us of less extent than it actually is. Now if the rays of light form precisely the same image in the eye, but the source of them is supposed to be further off in the horizon than in the zenith, such have been our mental habits that the object in the horizon will probably appear the largest.—(2) Another reason of the enlarged appearance of the sun and moon in the horizon is, that the rays from them fall on the body of the atmosphere obliquely, and of course are reflected downwards towards the beholder, and subtend a larger angle at his eye. Hence, as we always see objects in the direction of the ray just before it enters the eye, if we follow the rays back in the precise direction of their approach, they will present to the eye the outlines of a larger object as their source, than they would if they had not been refracted.—When the atmosphere is not clear, but unusual masses of vapour

are accumulated in it, whether immediately around us or any where else in the direction of the rays, the refraction is increased, and the object proportionally enlarged. This circumstance helps to explain the fact of the enlargement not being uniform, but sometimes greater and at others less. It may be added, that, on a principle practically the same with that of refraction, there will be an increased enlargement, when the disc of the sun or moon is seen through distant woods ; the rays being separated and turned out of their course by the trunks and branches.

§. 193. *Of the estimation of distances by sight.*

We are next led to the consideration of distances as made known and ascertained by the sight. By the distance of objects, when we use the term in reference to ourselves, we mean the space, which is interposed between those objects and our own position. It might be objected, that space interposed is only a synonymous expression for the thing to be defined. Nevertheless no one can be supposed to be ignorant of what is meant. Even blind men have a notion of distance, and can measure it by the touch, or by walking forward until they meet the distant object.

The perception of distance by the sight is an acquired and not an original perception ; although the latter was universally supposed to be the fact, until comparatively a recent period.

All objects in the first instance appear to touch the eye ; but our experience has corrected so many of the representations of the senses before the period, which we are yet able to retrace by the memory, that we cannot prove this by a reference to our own childhood and infancy. It appears, however, from the statement of the cases of persons born blind on the sudden restoration of their sight.

“ When he first saw, (says Cheselden, the anatomist, when giving an account of a young man, whom he had restored to sight by couching for the cataract,) he was so far from making any judgment about distance, that he

thought all objects touched his eye, as he expressed it, as what he felt did his skin ; and thought no objects so agreeable as those, which were smooth and regular, although he could form no judgment of their shape, or guess what it was in any object, that was pleasing to him."

This anatomist has further informed us, that he has brought to sight several others, who had no remembrance of ever having seen ; and that they all gave the same account of their learning to see, as they called it, as the young man already mentioned, although not in so many particulars ; and that they all had this in common, that having never had occasion to move their eyes, they knew not how to do it, and, at first, could not at all direct them to a particular object ; but in time they acquired that faculty though by slow degrees.*

Blind persons, when at first restored to sight, are unable to estimate the distance of objects by that sense, but soon observing, that certain changes in the visible appearance of bodies always accompany a change of distance, they fall upon a method of estimating distance by the visible appearance. And it would no doubt be found, if it could be particularly examined into, that all mankind come to possess the power of estimating the distances of objects by sight in the same way. When a body is removed from us and placed at a considerable distance, it becomes smaller in its visible appearance, its colours are less lively, and its outlines less distinct ; and we may expect to find various intermediate objects, more or fewer in number corresponding with the increase of the distance,

* Some doubts have been raised from time to time of the correctness of Cheselden's experiments and inquiries here referred to. Fortunately Mr. Stewart has taken up the subject with his accustomed caution and candour in his Account of James Mitchell, a boy born Deaf and Blind. He shows to ample satisfaction in a Note near the commencement of that Narration, that the facts, which have been brought forward in opposition to Cheselden, may be satisfactorily explained, without any impeachment of the correctness of his statements or of the justness of his conclusions from them.

showing themselves between the receding object and the spectator. And hence it is, that a certain visible appearance comes to be the sign of a certain distance.

Historical and landscape painters are enabled to turn these facts to great account in their delineations. By means of dimness of colour, indistinctness of outline, and the partial interposition of other objects, they are enabled apparently to throw back at a very considerable distance from the eye those objects, which they wish to appear remote. While other objects, that are intended to appear near, are painted vivid in colour, large in size, distinct in outline, and are separated from the eye of the spectator by few or no intermediate objects.

§. 194. *Of the estimation of distance when unaided by intermediate objects.*

As we depend in no small degree upon intermediate objects in forming our notions of distance, it results, that we are often much perplexed by the absence of such objects. Accordingly we find, that people frequently mistake, when they attempt to estimate by the eye the length or width of unoccupied plains and marshes, generally making the extent less than it really is. For the same reason they misjudge of the width of a river, estimating its width at half or three quarters of a mile at the most, when it is perhaps not less than double that distance. The same holds true of other bodies of water; and of all other things, which are seen by us in a horizontal position, and under similar circumstances.

We mistake in the same way also in estimating the height of steeples, and of other bodies, that are perpendicular, and not on a level with the eye, provided the height be considerable. As the upper parts of the steeple out-top the surrounding buildings, and there are no contiguous objects with which to compare it, any measurement taken by the eye must be inaccurate, but is generally less than the truth.

Hence perhaps it is, that a man on the top of a steeple appears smaller to those below, than the same man would

~~near to the same person, and at the same distance on level ground.~~ A man on the earth's surface, placed at the same distance, would probably appear nearly of his actual size. As we have been in the habit of measuring horizontal distances by the eye, we can readily form a nearly accurate opinion, whether a person be at an hundred feet distance, or more or less; and the mind immediately makes an allowance for this distance, and corrects the first visual representation of the size of the person so rapidly that we do not remember it. But having never been in the habit of measuring perpendicular distances, the mind is at a loss, and fails to make that correction, which it would readily, and, as it were, intuitively make in the case of objects on level ground. The mistake therefore of his supposed nearness, combined with this perplexity, causes the comparative littleness of the man on the steeple.

The fixed stars, when viewed by the eye, all appear to be alike indefinitely and equally distant. Being scattered over the whole sky, they make every part of it seem like themselves at an indefinite and equal distance, and, therefore, contribute to give the whole sky the appearance of the inside of a sphere. Moreover, the horizon seems to the eye to be further off than the zenith; because between us and the former there lie many things, as fields, hills, and waters, which we know to occupy a great space; whereas between us and the zenith there are no considerable things of known dimensions. And, therefore, the heavens appear like the segment of a sphere, and less than a hemisphere, in the centre of which we seem to stand.—And the wider our prospect is, the greater will the sphere appear to be and the less the segment.

In connection with what has been said, we are led to make this further remark, that a change in the purity of the air will perplex in some measure those ideas of distance, which we receive from sight. Bishop Berkeley remarks while travelling in Italy and Sicily, he noticed, that cities and palaces, seen at a great distance, appeared nearer to him by several miles than they actually were. The cause of this he very correctly supposed to be the purity

of the Italian and Sicilian air, which gave to objects at a distance a degree of brightness and distinctness, which, in the less clear and pure atmosphere of his native country, could be observed only in those towns and separate edifices, which were near. At home he had learnt to estimate the distance of objects by their appearance; but his conclusions failed him, when they came to be applied to objects in countries, where the air was so much clearer.— And the same thing has been noticed by other travellers, who have been placed in the like circumstances.

§. 195. *Of objects seen on the ocean, &c.*

A vessel seen at sea by a person, who is not accustomed to the ocean, appears much nearer than it actually is; and on the same principles as already illustrated. In his previous observations of the objects at a distance, he has commonly noticed a number of intermediate objects, interposed between the distant body and himself. It is probably the absence of such objects, that chiefly causes the deception, under which he labours in the present instance.

And this naturally leads to a remark on the power, which mariners are often found to possess, of distinguishing objects at a distance. They not only judge of the distance better, but they are thought to see much further than others. Frequently the experienced sailor will discover a vessel approaching in the edge of the horizon, and even be able to state the direction of her course and the number of her masts, while the land-man sees nothing of the kind; at least he thinks so. Perhaps, however, they both in many cases see the same small speck, but it speaks to them a very different language. To the sailor that mere speck is a vessel; the small breaks, which he discerns in it, distinctly convey to his mind the idea of masts and masts; he readily and gladly interprets the dim and diminished signs before him, and with but little danger of mistake. But to the land-man, who has never been practised in this sort of interpretation, these signs are

without signification ; they are the writing of a foreign language, and impart no meaning.

§. 196. *Supposed feelings of a being called into existence in the full possession of his powers.*

In illustration of the principles, which have been brought forward in the successive consideration of the senses, we are tempted to introduce in this place a favorite passage of the celebrated Buffon. In the Natural History of that learned writer we have an account of the process, by which the full use of the sight and of the other external senses is acquired. He invents a delightful recital, and puts it in the mouth of our first parent ; and thus instructs us in the most abstruse subjects by an appeal to the imagination.

“Let us suppose (says he) a man newly brought into existence, whose body and organs are already perfectly formed, but who, awaking amidst the productions of Nature, is an utter stranger to every thing he perceives both from without, and from within. Of a man thus circumstanced what would be the first emotions, the first sensations, the first opinions? Were he himself to give us a detail of his conceptions at this period, how would he express them? Might it not be in some measure as follows?

“Well do I recollect that joyful, anxious moment, when I first became conscious of my own existence.—I knew not what I was, where I was, or whence I came. On opening my eyelids, what an addition to my surprise ! The light of day, the azure vault of heaven, the verdure of the earth, the chrystal of the waters, all employed, all animated, and filled me with inexpressible delight.

“At first, I imagined that all those objects were within me, and formed a part of myself. Impressed with this idea, I turned my eyes towards the sun, whose splendour instantly dazzled and over-powered me. Involuntarily I closed my eyelids, though not without a slight sensation of pain ; and, during this short interval of darkness, I imagined that I was about to sink into nothing.

“Full of affliction and astonishment, I had begun to

ponder on this great change, when, listening, I heard a variety of sounds. The whistling of the wind, and the melody of the grove formed a concert, of which the soft impression pervaded the inmost recesses of my soul. I continued to listen ; nor could I banish the persuasion, that all this music was actually within me.

“ So much was I engrossed with this new kind of existence, that I entirely forgot the light, that other part of my being, which I had known the first, till again I had opened my eyes. What joy to find myself once more in possession of so many brilliant objects ! The present pleasure surpassed the former, and for a time suspended the charming effect of sounds.

“ I turned my eyes upon a thousand different objects. These, which I still considered as a part of myself, I soon found that I could lose, and restore at pleasure ; and with a repetition of this new power I continued to amuse myself.

“ I had begun to see without emotion, and to hear without confusion, when a light breeze, of which the freshness communicated a new sensation of pleasure, wafted its perfumes to me, and excited in me a kind of additional self-love.

“ Agitated by all these different sensations, and impelled by the various pleasures of my new existence, I instantly arose, and in arising perceived myself moved along, as if by some unknown, some hidden power.

“ Hardly had I advanced one step, when the novelty of my situation rendered me, as it were, immovable. My surprise returned ; for I supposed that all the objects around me were in motion ; to them I ascribed that agitation, which I had myself produced by changing place ; and the whole creation seemed once more to be in disorder.

“ I carried my hand to my head ; I touched my forehead ; I felt my whole frame. Then it was that I first conceived my hand to be the principle organ of my existence. All its informations were so distinct, so perfect, and so superior to what I had experienced from the other senses,

that I employed myself for some time in repeating its enjoyments. Every part of my body, which I touched with my hand, seemed to touch my hand in turn, and actually gave back sensation for sensation.

“It was not long before I perceived that this faculty was expanded over my whole frame and before I began to discover the limits of my existence, which, at first, I had supposed of an immense extent, and diffused over all the objects I saw.

“Upon casting my eyes upon my body, and surveying my own form I conceived it to be of a size so enormous, that all the objects, which had hitherto struck my eyes, seemed to be, in comparison, as so many luminous particles. I gazed upon my person with pleasure. I examined the formation of my hand, and all its motions; and the former appeared to me more or less large, in proportion as it was more or less distant from my eyes. On bringing it very near, it concealed, I found, almost every other object from my sight.

“I began soon, however, to suspect that there was some fallacy in the sensation I experienced from the eye; and I therefore resolved to depend, for information, upon the touch, which as yet had never deceived me. This precaution was highly serviceable. I renewed my motions, and walked forward with my face turned towards the heavens. Happening to strike lightly against a palm tree, I was dismayed, and laid my hand, though not without fear, upon this extraneous body; for extraneous I conceived it to be, as it did not return sensation for sensation, as my former feelings had done. Now it was that, for the first time, I perceived there was something external, something which did not form an actual part of my own existence.

“From this new discovery I concluded, that I ought to form my opinion with respect to external objects, in the same manner as I had done with respect to the parts of my body. I resolved, therefore, to feel whatever I saw; and, vainly attempting to touch the sun, I stretched forth my arms, and found nothing but an airy vacuum. At eve-

ry effort I made, as each object appeared to me equally near, from one fit of surprise I fell into another ; nor was it till after an infinite number of trials, that I was enabled to use the eye as a guide to the hand, and that I perceived there were some objects more remote from me than others.

“ Amazed and mortified at the uncertainty of my state, and at the endless delusions to which I seemed to be subjected, the more I reflected, the more I was perplexed. Fatigued and oppressed with thought, I seated myself beneath a tree, loaded with delicious fruit within my reach. On stretching forth my arm, the fruit instantly separated from the branches, and I seized it. To grasp in my hand an entire substance, which formed no part of myself, pleased me. When I held it up, its weight, though in itself trivial, seemed, however, like an animated impulse, to incline it to the earth. In conquering this resistance I found another, and a greater pleasure.

“ I held the fruit near my eye, and I considered its form, and its colours. Its fragrance prompted me to carry it nearer and nearer, and with eagerness did I inhale that fragrance. The perfume invited my sense of tasting, which I found to be superior to that of smelling. What savour, what novelty of sensation, did I now experience! Nothing could be more exquisite. What before had been pleasure, was now heightened into luxury. The power of tasting gave me the idea of possession. I imagined that the substance of this fruit had become a part of my own substance, and that I was empowered to transform things without me at will.

“ Charmed with the idea of this new power, and incited by the sensations I had already experienced, I continued to pluck the fruit ; nor did I think any labour too great for the satisfaction of my taste. At length, however, an agreeable languor stealing upon my senses, my limbs became heavy, and my soul seemed to lose its activity. My sensations, no longer vivid and distinct, presented to me only feeble and irregular images. In the instant, as it were, my eyes became useless, closed ; and my head, no longer borne up by the strength of the muscles, sunk

back, and found a support upon the verdant turf beneath me."

§. 197. *Of the senses considered as a foundation of belief and knowledge.*

It may be proper to recur here to the subject of the senses, considered as one of the great sources of belief and knowledge. This is a topic of so much importance as to justify repeated efforts to place it on a right foundation and to do away objections. It may be asserted without fear of contradiction, that we find in the daily conduct of men abundant evidence that the senses are the foundation, to a great extent, of their opinions, reasonings, and actions. That objections have been made to a reliance upon the testimony of the senses is true; and we have already endeavoured to answer them, and place their futility in the true light. But in connection with the view, which has now been taken of the senses, we are especially prepared to impress anew the sentiments, expressed in a former section on this subject, that each of the senses has its allotted sphere, its appropriate acts and responsibilities. This is an important idea in making up a proper estimation of the senses, considered as a source of belief.

The imperfect examination of the senses, which we have just gone through, evinces the truth of this remark. It is the business, the appropriate function of the sense of smelling to give us a knowledge of the odours of bodies. When we have these sensations we may be led from some principle of the mind to look for the cause of them, but nothing more. We do not learn from it what that cause is. It is not pretended, that this sense alone can give us the notion of an external, odoriferous body. The sense of taste is equally limited with that of smell, but both, as far as they go, are grounds of knowledge, and do not deceive. It might no doubt be said, that they may be diseased, and thus mislead us; but the remarks of this section go on the supposition, that the senses are in a sound state.—When we come to the sense of hearing, we find, that the perceptions of sound have in part an acquired

character. The reference of a particular sound to a particular external cause always implies the previous exercise of the sense of touch, also the exercise of that principle of the mind, which is termed association, and of an act of the judgment. But hearing, when in a sound state, is always a ground of belief and knowledge, as far as the mere sensation of sound is concerned ; and so far can be most certainly trusted.

It is the appropriate business of the sense of sight, against the testimony of which so many objections have been made, to render us acquainted with the colours of bodies. To say, therefore, that it leads us into errors in respect to solidity, extension, size, direction, or distance, is but very little, or rather nothing to the purpose. These are acquired perceptions, and have their origin in another sense, that of touch. The visual sensations are in these cases mere signs of the knowledge, which we have from another source. When therefore we separate what belongs to the sight from what belongs to the touch, and distinguish between them, it is impossible to fix the charge of misrepresentation upon either.

And hence on the question, Whether our senses mislead us, we are always to consider, to which of the senses the particular ideas under review appropriately belong. And in all cases when we are searching after truth, it becomes us to call in the aid of all the senses, and not to consult one to the entire omission of the others. They all make parts of one great and wonderful system, and cannot be safely separated. When they are in a sound state, when the ideas, of which they are the origin, are properly discriminated, and further, when the intimations of one sense are aided by those of another and by the guidance of the reasoning power, which clearly ought not to be excluded, we may then confidently expect to be led by them into the truth, so far as our Creator designed, that it should be made known to us.

§. 198. *Illustrations of the subject of the preceding section.*

The views of the last section admit of some illustra-

tion in respect to the sun and moon. These heavenly bodies, as they come under the cognizance of the sight, appear to be very small, but in point of fact are known to be very large. Still in this very instance, (although this is one of the cases most frequently referred to by the expositors of the alleged weaknesses and errors of the senses,) it cannot be shown that there is any deception practised upon us by that sense. It has sufficiently appeared, that extension, figure, the magnitude, and the distance of bodies are not direct objects of sight, and that our notions of them are not original in that sense, but are acquired. While therefore we have a direct acquaintance with colours by means of sight, it happens that, in estimating the distance of objects by the same sense, we are obliged to call in the aid of the intimations of the touch, and to make use also of comparison and judgment. And hence we are able to fix on this general principle, that the apparent magnitude of an object will vary with its distance.

It is clear therefore, that there is no deception practised upon us. When by such calculations as we are able to make, we have ascertained the distance of the sun and moon, then every one is satisfied, that their apparent magnitude or their appearance to the eye is just such as it should be; and that the eye gives to us precisely the same representation as in any other instance of visible objects presented to it. It gives such a view of the object as it was designed to give; and teaches us here the same as it teaches us constantly.

There are many instances, where the subject might be placed in the true light, and where it would clearly appear, how far our knowledge from the senses extends, and in what respects we must derive knowledge from some other source. It is well known, (to take an illustration not unfrequently referred to by writers,) that the vibrations of a pendulum are affected by its geographical position, the latitude where it is. Before this fact was ascertained, a person might readily have employed a pendulum of a given length as a measure of comparative dura-

tion at two distant points on the globe's surface. And when he had done this, he might have been disposed to declare on the authority of his senses and personal observation, that two portions of time, measured in different latitudes, were the same, although they were in fact different.

But here comes the question, Are his senses to blame for this mistake? Not at all. The testimony of the senses and of observation, as far as it went, was correct. The mistake is evidently to be attributed to erroneous deduction. The conclusion was bottomed on the great and undoubted principle in reasoning, that the laws of nature are uniform. But then there were various assumptions in this particular case, viz, that the earth is circular and not a spheroid, that the same quantity of the attractive force of the earth operates on the pendulum at every point on the earth's surface, &c. Here is the foundation of the mistake ; in certain facts precipitately assumed as grounds of reasoning, and in the deductions from them, and not in the senses.—Such instances, which might be multiplied to almost any extent, tend to confirm the doctrine, that the senses are justly regarded as an elementary law of belief, and that they are foundations of real knowledge.

§. 199. *Historical notice of the doctrine of acquired visual perceptions.*

There is abundant evidence, that the doctrine of acquired perceptions of sight was unknown to antiquity. "It is not, (says Aristotle, *Ethic. Nicomach. Lib. II. CAP. I.,*) from seeing often or from hearing often, that we get these senses ; but on the contrary, instead of getting them by using them, we use them, because we have got them." Nor was this doctrine understood and clearly proved until a somewhat recent period, it being the received opinion even among well informed persons, that the eye judges naturally of the magnitude, figure, and distances of objects. But there were difficulties attending that view of the subject ; it was not readily seen, how an original and natural power of judging in those

respects by the sense of sight could well consist with the mistakes, which were found to be made by an unrestricted reliance upon it. In the conclusion of the Optical Lectures of Dr. Barrow, who flourished about the middle of the Seventeenth century, and is well known both for his theological and mathematical writings, the author alludes to the subject of our visual perceptions in such a way as to let us know what perplexity rested upon it so late as that period. He frankly acknowledges that there are some facts in relation to the perception of the distances of external objects, which are involved in the mysteries of nature, and will probably not be cleared up, until the manner of vision shall be more perfectly known. He finds himself too much at a loss even to attempt an explanation, and accordingly leaves them to future inquirers.

At a later period, Mr. Molyneux and Mr. Locke evidently had views on this subject closely approximating to what is now considered the true explanation of these phenomena, as may be inferred in particular from their correspondence, and from some remarks in the second book of the Essay on the Understanding. And there is reason to believe that at a period as early, and probably more so, Malebranche had fallen into nearly the same train of thought.

But it is only justice to a learned and ingenious man to remark here, that the statement of our visual perceptions, as above given in the sections relating to them, was first fully proposed and established by Dr. Berkeley, bishop of Cloyne, in a work published in 1709, and entitled AN ESSAY TOWARDS A NEW THEORY OF VISION. This work is written in a simple and perspicuous style, well adapted to philosophical subjects, and is pronounced by Adam Smith, (no incompetent judge,) to be one of the finest examples of philosophical analysis, that is to be found in our own, or any other language.

The reasonings and illustrations of Berkeley are con-

firmed by the experiments of Cheselden ; and more recently the whole subject has been placed in new and interesting lights by Dugald Stewart in his account of James Mitchell, a boy born Deaf and Blind, and also in other passages of that admirable writer.

Note. The following writers also have remarked more or less fully on the topics of this chapter; Condillac, *Origin of Human Knowledge*, Pt. I. §.6; Reid, *Inquiry into the Human Mind*, CHAP. 2, 3, 4, &c; Beattie on the Imagination; Adam Smith, *Essay on the External Senses*; Buffon, *Natural History*, ART. Man; De Stutt Tracy, *Elements of Ideology*, (*Elémens d'Idéologie*,) CHAP. 3; Brown, *Philosophy of the Human Mind*, LECTS. xvi.—xxv; Buffier, *First Truths*, Pt. I. CHAP. 16; Condillac, *Treatise on Sensations*, (*Traité des Sensations*,)—This work is written with the author's accustomed clearness, and presents many of the truths, to which we have been attending, in their appropriate light, although there is this general exception to be taken to it, that he carries his fundamental principle too far. Condillac has frequently been regarded as the disciple of Locke ; but there is this marked and prominent disagreement between them. Locke asserted the existence of two great and distinct sources of knowledge, the Internal and External, Sensation and Reflection ; Condillac held the untenable doctrine, that there is but one, and that all our knowledge is directly from the senses.

CHAPTER SEVENTH.

HABITS OF SENSATION AND PERCEPTION.

§. 200. *Of the law of habit in general and its applications.*

In almost every step of the mind's history we find applications of the Law of Habit, the outlines of which have already been treated of. The general principle, laid down as involved in that Law, was this, that the repetition of any act, whether mental or bodily, increases the tendency to and the facility of that act. Of course it is a very different thing from mere Association, with which Dr. Brown seems to have confounded it. So far from being identical with association, the latter is under certain circumstances greatly controlled and directed by it ; a fact, which clearly implies a distinction in the two.

And it may be necessary to recall to mind here, that there is a difference, not only in this but in all cases, between a LAW of the mind, and its SUSCEPTIBILITIES, although sometimes the same name is given to both. (See §. 55.) Habit accordingly is not to be regarded in the light of a mental power, but rather as a general principle or fact, applicable to the action of such powers as the mind possesses. It extends in its operation, as has been intimated, not only to the cognitive part of our nature, but to the heart ; to the emotions and passions as well as the thoughts and intellections ; to the whole mind and even to

the body. As we pass along from the consideration of the mind as influenced by outward objects to the consideration of it, as influenced by its own inward acts, and from the intellectual to the sentient, or as it is sometimes termed, the active part of our constitution, we shall find evidence of this. And the discovery will unfold views of human nature of the most practical kind, without coming short of the highest degree of interest. In the present connection we are to consider Habit in its relation to SENSATION and PERCEPTION; in other words as applicable to the mental acts, considered as caused by outward objects through the medium of the senses.

§. 201. *Of habit in relation to the smell.*

We shall consider the application of the principle to the senses in the same order that has already been observed. In the first place, there are habits of Smell.—This sense like the others is susceptible of cultivation. As there are some persons, whose power of distinguishing the difference of two or more colours is feeble; so there are some, who are doubtful and perplexed in like manner in the discrimination of odours. And as the inability may be overcome in some measure in the former case, so it may be in the latter. The fact, that the powers of which the smell is capable are not more frequently brought out and quickened, is owing to the circumstance, that it is not ordinarily needed. It sometimes happens however, that men are compelled to make an uncommon use of it, when by a defect in the other senses they are left without the ordinary helps to knowledge. It is then we see the effects of the law of Habit. It is stated in Mr. Stewart's Account of James Mitchell, who was deaf, sightless, and speechless, and of course strongly induced by his unfortunate situation to make much use of the sense we are considering, that his smell would immediately and invariably inform him of the presence of a stranger, and direct to the place where he might be; and it is repeatedly asserted, that this sense had become in him extremely acute.

In an interesting account of a deaf, dumb, and blind girl in the Hartford Asylum recently published, statements are made on this subject of a similar purport.—“It has been observed (says the writer) of persons, who are deprived of a particular sense, that additional quickness, or vigour seems to be bestowed on those which remain. Thus blind persons are often distinguished by peculiar exquisiteness of touch, and the deaf and dumb, who gain all their knowledge through the eye, concentrate, as it were, their whole souls in that channel of observation. With her, whose eye, ear, and tongue are alike dead, the capabilities both of touch and smell are exceedingly heightened. Especially the *latter* seems almost to have acquired the properties, of a new sense, and to transcend the sagacity even of a spaniel.”—Such is the influence of habit on the intimations of the sense under consideration.

§. 202. *Of habit in relation to the taste.*

The same law is applicable to the Taste. We see the results of the frequent exercise of this sense in the quickness, which the dealer in wines discovers in distinguishing the flavour of one wine from that of another. It is no secret also what a wonderful perception of this kind professed epicures acquire. If it were not a law of our nature, that our sensations become acute and discriminating by repeated exercise, how many reputations of cooks and confectioners would have been saved; and how many grave discussions over the birds of the air and the fishes of the sea would have fallen to the ground for lack of argument !

Another practical view of this subject, however, presents itself here. The sensations, which we experience in this and other like cases, not only acquire by repetition greater niceness and discrimination, but increased strength ; (and perhaps the increased strength is in all instances the foundation of the greater power of discrimination.) On this topic we have a wide and melancholy source of illustration. The bibber of wine and the drinker of ardent spirits readily acknowledge,

that the sensation was at first only moderately pleasing, and perhaps in the very slightest degree. Every time they carried the intoxicating potion to their lips, the sensation grew more pleasing, and the desire for it waxed stronger. Perhaps they were not aware that this process was going on in virtue of a great law of humanity ; but they do not pretend to deny the fact. They might indeed have suspected at an early period, that chains were gathering around them, whatever might be the cause ; but what objection had they to be bound with links of flowers ; delightful while they lasted, and easily broken when necessary ! But here was the mistake. Link was added to link ; chain was woven with chain, till he, who boasted of his strength, was at last made sensible of his weakness, and found himself a prisoner, a captive, a deformed, altered, and degraded slave.

There is a three-fold operation. The sensation of taste acquires an enhanced degree of pleasantness ; the feeling of uneasiness is increased in a corresponding measure, when the sensation is not indulged by drinking ; and the desire, which is necessarily attendant on the uneasy feeling, becomes in like manner more and more imperative. To alleviate the uneasy feeling and this importunate desire, the unhappy man goes again to his cups, and with a shaking hand pours down the delicious poison. What then ? He has added a new link to his chain ; at every repetition it grows heavier and heavier ; till that, which at first he bore lightly and cheerfully, now presses him like a coat of iron, and galls like fetters of steel. There is a great and fearful law of his nature bearing him down to destruction. Every indulgence is the addition of a new weight to what was before placed upon him, thus lessening the probability of escape, and accelerating his gloomy, fearful, and interminable sinking. We do not mean to say, that he is the subject of an implacable destiny, and cannot help himself. But it would seem, that he can help himself only in this way ; by a prompt, absolute, and entire suspension of the practice in all its forms, which has led him into this extremity. But few however have

the resolution to do this ; the multitude make a few unwilling and feeble efforts, and resign themselves to the horrors of their fate.

Some years since there was a pamphlet published in England, entitled the Confessions of a Drunkard. The statements made in it are asserted on good authority to be authentic. And what does the writer say ?—"Of my condition there is no hope that it should ever change ; the waters have gone over me ; but out of the black depths could I be heard, I would cry out to all those who have but set a foot in the perilous flood. Could the youth to whom the flavour of his first wine is delicious as the opening scenes of life, or the entering upon some newly discovered paradise, look into my desolation, and be made to understand what a dreary thing it is, when a man shall feel himself going down a precipice with open eyes and a passive will,—to see his destruction, and have no power to stop it, and yet to feel it all the way emanating from himself ; to perceive all goodness emptied out of him, and yet not be able to forget a time when it was otherwise ; to hear about the piteous spectacle of his own self ruins :—could he see my fevered eye, feverish with last night's drinking, and feverishly looking for this night's repetition of the folly ; could he feel the body of the death out of which I cry hourly, with feebler and feebler outcry, to be delivered—it were enough to make him dash the sparkling beverage to the earth in all the pride of its mantling temptation."*

§. 203. *Of habit in relation to the hearing.*

There is undoubtedly a natural difference in the quickness and discrimination of hearing. This sense is more acute in some than in others ; but in those, who possess it in much natural excellence, it is susceptible of a high degree of cultivation. Musicians are a proof of this, whose sensibility to the melody and concord of sweet sounds continually increases with the practice of their art.

This increase of sensibility in the perceptions of hearing

* London Quarterly Review, Vol. XXVII, p. 120.

is especially marked and evident, when uncommon causes have operated to secure such practice. And this is the state of things with the Blind. The readers of Sir Walter Scott may not have forgotten the blind fiddler, who figures so conspicuously with *verse* and harp in *Red Gauntlet*; a character sufficiently extraordinary, but by no means an improbable exaggeration. The blind necessarily rely much more than others on the sense of hearing. By constant practice they increase the accuracy and power of its perceptions. Shut out from the beauties that are seen, they please themselves with what is heard, and greedily drink in the soul of song. Accordingly music is made by them not only a solace, but a business and a means of support; and in the Institutions for the Blind this is considered an important department of instruction.

Many particular instances on record and well authenticated confirm the general statement, that the ear may be trained to habits, and that thus the sensations of sound may come to us with new power and meaning. It is related of a celebrated blind man of Poiseaux in France, that he could determine the quantity of fluid in vessels by the sound it produced while running from one vessel into another. Any person may ascertain the presence and approach of another without seeing him by the mere sound of his voice; but there have been blind men, who were capable, in consequence of being obliged from the lack of sight to rely much on the hearing, of ascertaining the same thing from the sound of their tread. Dr. Saunderson, who became blind so early as not to remember having seen, when happening in any new place, as a room, piazza, pavement, court, and the like, gave it a character by means of the sound and echo from his feet; and in that way was able to identify pretty exactly the place, and assure himself of his position afterwards. A writer in the First Volume of the Manchester Philosophical Memoirs, who is our authority also for the statement just made, speaks of a certain blind man in that city, as follows;—
“I had an opportunity of repeatedly observing the peculiar manner, in which he arranged his ideas, and acquired

his information: . Whenever he was introduced into company, I remarked that he continued some time silent. The sound directed him to judge of the dimensions of the room ; and the different voices, of the number of persons that were present. His distinction in these respects was very accurate ; and his memory so retentive, that he was seldom mistaken. I have known him instantly recognize a person, on first hearing him, though more than two years had elapsed since the time of their last meeting. He determined pretty nearly the stature of those he was conversing with, by the direction of their voices ; and he made tolerable conjectures respecting their tempers and dispositions, by the manner in which they conducted their conversation."

§. 204. *Of certain universal habits based on sounds.*

There are certain habits of hearing, (perhaps we should say classes of habits,) which all men, by the aid of the other senses combined with that of the judgment, form at an early period of life. The first class of habits here referred to are those, which have relation to the particular cause and the distance of sounds. The manner, in which we learn these, has been pointed out in a previous section. (§. 175.) The mere sensations of sound are entirely a distinct thing from the ideas of cause, place, and direction, which we generally combine with them. Owing to frequent repetition from early life, this combination is effected so rapidly, that we are unable to retrace the successive steps of the process, and the whole seems to be involved in a single sensation. Perhaps it may be said, that the effect of repetition, (that is to say, the HABIT,) has more direct and special relation to the act of judgment, which combines the reference with the sensation, than to the sensation itself. However that may be, it may still be proper to speak of habits of hearing in the respect now under consideration, when we remember, that the reference has been so long and closely interwoven with the sensation, as to be apparently and practically, though not really identical with it.

In respect to spoken language also, our habits are so laboriously and deeply founded, that we may almost consider ourselves as having a new sense superadded to that of hearing. In our ordinary conversation with others, we seem to hear the whole of what is said; nothing is lost as we imagine. But that this is not the fact, and that we are sustained in such cases not wholly by an actual sensation of sound, but in part at least by an acquired power or HABIT, is evident from this. When we hear proper names, whether of persons, places, or natural objects, pronounced for the first time, we often hesitate in respect to them; are not certain that we possess the syllables intended to be conveyed; and ask for the repetition of them. We experience the same difficulty and uncertainty, as every one must have known who has tried it, when we hear a person read or converse in a foreign language. But when the conversation is in our own language, and relates to persons and objects we are acquainted with, it is altogether different, as has already been intimated. But what is the ground of the difference? Why are we perplexed in one case and not in the other?—In our intercourse with others in conversation it almost constantly happens, (at least as much so as on any other occasions,) that the ear catches nothing but imperfect syllables, half-uttered words, sounds jumbled and commingled together; but we are nevertheless not commonly at a loss and perplexed, as in the cases before mentioned. By the aid of judgment and the power of conception, whose action has in this case by long repetition formed itself into a prompt and decisive habit, we at once separate these confused elements, supply the breaks in their connection, fill up the deficiencies, and make out a continuous and significant whole. And yet this is done so rapidly, and is so common, that in most cases we imagine there is nothing more than the pure and unmixed sensation.

§. 205. *Application of habit to the touch.*

The sense of touch like the others may be exceedingly improved by habit. The more we are obliged to call it

into use, the more attention we pay to its intimations. By the frequent repetition therefore under such circumstances, these sensations not only acquire increased intensity in themselves; but particularly so in reference to our notice and remembrance of them. But it is desirable to confirm this, as it is all other principles from time to time laid down, by an appeal to facts, and by careful inductions from them.

Diderot relates of the blind man of Puiseaux mentioned in a former section, that he was capable of judging of his distance from the fire-place by the degree of heat, and of his approach to any solid bodies by the action or pulse of the air upon his face. The same thing is recorded of many other persons in a similar situation; and it may be regarded as a point well established, that blind people, who are unable to see the large and heavy bodies presenting themselves in their way as they walk about, generally estimate their approach to them by means of the increased resistance of the atmosphere.* A blind person, owing to the increased accuracy of his remaining senses, especially of the touch, would be better trusted to go through the various apartments of a house in the dark-

* It is a singular circumstance, that something similar to what is here stated of the ability of blind men to discover the nearness or distance of objects by changes in the resistance of the atmosphere, has been noticed by the naturalist, Spallanzani, in respect to bats. He discovered that bats, when perfectly blinded and afterwards set at liberty, had the extraordinary faculty of guiding themselves through the most complicated windings of subterraneous passages, without striking against the walls, and that they avoided with great skill cords, branches of trees, and other obstacles, placed by design in their way.

This ability is probably owing to an extreme delicacy in the wing, which is of a very large size in proportion to that of the animal, and is covered with an exceedingly fine net-work of nerves. The bat, as it strikes the air with its wing, receives sensations of heat, cold, and resistance, and, in consequence, is enabled to avoid objects, which would otherwise obstruct its flight, apparently in the same way that blind persons perceive a door or a wall by a change in the temperature or in the resistance of the air.

ness of midnight, than one possessed of the sense of seeing without any artificial light to guide him.

In the celebrated Dr. Sounderson, who lost his sight in very early youth, and remained blind through life, although he occupied the professorship of mathematics in the English University of Cambridge, the touch acquired such acuteness, that he could distinguish, by merely letting them pass through his fingers, spurious coins, which were so well executed as to deceive even skilful judges who could see.†

The case of a Mr. John Metcalf, otherwise called Blind Jack, which is particularly dwelt upon by the author of the Article in the Memoirs just referred to, is a striking one. The writer states, that he became blind at an early period ; but, notwithstanding, followed the profession of a waggoner and occasionally of a guide in intricate roads, during the night, or when the tracks were covered with snow. At length he became a projector and surveyor of highways in difficult and mountainous districts ; an employment, for which one would naturally suppose a blind man to be but indifferently qualified. But he was found to answer all the expectations of his employers, and most of the roads over the peak in Derbyshire in England were altered by his directions. Says the person, who gives this account of Blind Jack, "I have several times met this man with the assistance of a long staff traversing the roads, ascending precipices, exploring vallies, and investigating their several extents, forms, and situations, so as to answer his designs in the best manner."

In the interesting Schools for the Blind, which have been established in various parts of Europe, the pupils read by means of the fingers. They very soon learn by the touch to distinguish one letter from another, which are made separately for that purpose of wood, metals, or other materials. The printed sheets which they use are conformed to their method of studying them. The types are much larger than those ordinarily used in printing ; the paper is very thick, and being put upon the types

†Memoirs of Manchester Philos. Society, Vol. I. p. 164.

while wet, and powerfully pressed, the letters on it are consequently raised, and appear in relief. The pupils, having before learnt to distinguish one letter from another, and also to combine them into syllables and words, are able after a time to pass their fingers along the words and sentences of these printed sheets, and ascertain their meaning with a good degree of rapidity.

... Perhaps it may occasion some surprise, when we add, that men may not only read by the touch, but may even find a substitute for the hearing in that sense. Persons, who were entirely deaf, have in some instances discovered a perception of the proportion and harmony of sounds.

... "It will scarcely be credited, (says an English writer, speaking of one in that situation,) that a person thus circumstanced should be fond of music; but this was the fact in the case of Mr. Arrowsmith. He was at a gentleman's glee club, of which I was president at that time, and, as the glees were sung, he would place himself near some article of wooden furniture, or a partition, door, or window shutter, and would fix the extreme end of his finger nails, which he kept rather long, upon the edge of some projecting part of the wood, and there remain until the piece under performance was finished, all the while expressing, by the most significant gestures, the pleasure he experienced from the perception of musical sounds. He was not so much pleased with a solo, as with a pretty full clash of harmony; and if the music was not very good, or, I should rather say, if it was not correctly executed, he would show no sensation of pleasure. But the most extraordinary circumstance in this case is, that he was most evidently delighted with those passages, in which the composer displayed his science in modulating the different keys. When such passages happened to be executed with precision, he could scarcely repress the emotions of pleasure which he received within any bounds; for the delight he evinced seemed to border on extacy."^{*}

* London Quarterly Review, Vol. XXVI, p. 404.

§. 206. *Other striking instances of habits of touch.*

The power of the touch will increase in proportion to the necessity of a reliance on it. The more frequent the resort to it, the stronger will be the habit ; but the necessity of this frequent reference to it will be found to be peculiarly great, where a person is deprived of two of his other senses. It is noticed of James Mitchell, whose case has been already referred to, that he distinguished such articles as belonged to himself from the property of others by this sense. Although the articles were of the same form and materials with those of others, it would seem, that he was not at a loss in identifying what was his own. It will be recollected, that he could neither see nor hear, and was of course speechless. He was obliged therefore to depend chiefly on the touch. This sense was the principal instrument he made use of in forming an acquaintance with the strangers, who frequently visited him. And what is particularly remarkable, he actually explored by it, at an early period, a space round his father's residence of about two hundred yards in extent, to any part of which he was in the practice of walking fearlessly and without a guide, whenever he pleased.

It is related of the deaf and blind girl in the Hartford Asylum, that it is impossible to displace a single article in her drawers without her perceiving and knowing it ; and that when the baskets of linen are weekly brought from the laundress, she selects her own garments without hesitation, however widely they may be dispersed among the mass. This is probably owing, at least in great part, to habits of touch, by means of which that sense has been rendered exceedingly acute.—Diderot has even gone so far as to conjecture, that persons, deprived of both sight and hearing, would so increase the sensibility of touch as to locate the seat of the soul in the tips of the fingers.

§. 207. *Habits considered in relation to the sight.*

The law of habit affects the sight also. By a course of training this sense seems to acquire new power. The

length and acuteness of vision in the mariner, who has long traversed the ocean, was referred to in the preceding chapter. There are numerous instances to the same effect, occasioned by the situations in which men are placed, and the calls for the frequent exercise of that sense. The almost intuitive vision of the skilful engineer is beyond doubt in most cases merely a habit. He has so often fixed his eye upon those features in a country, which have a relation to his peculiar calling, that he instantly detects the bearing of a military position, its susceptibility of defence, its facilities of approach and retreat, &c.

No man is born without the sense of touch, but many are born without the sense of hearing; and wherever this is the case, we are entitled to look for habits of sight. Persons under such circumstances naturally and necessarily rely much on the visual sense, whatever aids may be had by them from the touch. Hence habits; and these imply increased quickness and power, wherever they exist. It is a matter of common remark, that the keenness of visual observation in the DEAF and DUMB is strikingly increased by their peculiar circumstances. Shut out from the intercourse of speech, they read the minds of men in their movements, gestures, and countenances. They notice with astonishing quickness, and apparently without any effort, a thousand things, which escape the regards of others. This fact is undoubtedly the foundation of the chief encouragement, which men have to attempt the instruction of that numerous and unfortunate class of their fellow beings. They can form an opinion of what another says to them by the motion of the lips; and sometimes even with a great degree of accuracy. That this last however is common, it is not necessary to assert; that it is possible, we have the testimony of well authenticated facts. In one of his letters, Bishop Burnet mentions to this effect the case of a young lady of Geneva.—“At two years old (he says) it was perceived, that she had lost her hearing, and ever since, though she hears great noises, yet hears nothing of what is said to her: but by observing the motion of the lips and mouths of others, she acquired so

many words, that out of these she has formed a sort of jargon in which she can hold conversation, whole days, with those who can speak her language. She knows nothing of what is said to her, unless she sees the motion of their lips that speak to her: one thing will appear the strangest part of the whole narrative. She has a sister with whom she has practised her language more than with any body else, and in the night, by laying her hands on her sister's mouth, she can perceive by that what she says, and so can discourse with her in the dark." (London Quarterly Review, Vol. xxiv, p. 399.)

Such are the views, which have been opened to us, in considering the law of HABIT in connection with the senses; and we may venture to say with confidence, that they are exceedingly worthy of notice. There are two suggestions, which they are especially fitted to call up. They evince the striking powers of the human mind, its irrepressible energies, which no obstacles can bear down. They evince also the benevolence of our Creator, who opens in the hour of misery new sources of comfort, and compensates for what we have not, by increasing the power and value of what we have.

§. 208 *Sensations may possess a relative, as well as positive increase of power.*

There remains a remark of some importance to be made in connection with the general principle, which has been brought forward, and as in some measure auxiliary to it; for it will help to explain the more striking instances of habits, if any should imagine, that the fact of mere repetition is not sufficient to account for them. Our sensations and perceptions may acquire not only a direct and positive, but a relative and virtual increase of power.

This remark is thus explained. We shall hereafter see the truth of an important principle to this effect, that there will be a weakness of remembrance in any particular case in proportion to the want of interest in it. Now hundreds and thousands of our sensations and perceptions are not remembered, because we take no interest in them.

Of course they are the same, relatively to our amount of knowledge and our practice, as if they had never existed at all. But when we are placed in some novel situation, or when in particular we are deprived of any one of the senses, the pressure of our necessities creates that interest, which was wanting before. Then we delay upon, and mark, and remember, and interpret a multitude of evanescent intimations, which were formerly neglected. They thus acquire a very considerable relative power and value. And in order to make out a satisfactory explanation of some instances of habits, it is perhaps necessary, that this relative increase should be added to the direct and positive augmentation of vigour and quickness, resulting from mere repetition or exercise.

§ 209. *Of habits as modified by particular callings or arts.*

Hitherto it has been our chief object to examine habits in their relation to the senses separately; it is proper also to take a general view of them, as formed and modified by the particular callings and employments of men. Habits of perception are frequently formed under such circumstances, where all the senses are not only possessed, but where they exist with their ordinary aptitudes and powers.

In consequence of the habits, which he has been called upon to form by his particular situation, a farmer of a tolerable degree of experience and discernment requires but a slight inspection, in order to give an opinion on the qualities of a piece of land, and its suitableness for a settlement. A skilful printer will at once notice every thing of excellence or of deficiency in the mechanical execution of a printed work.—The same results are found in all, who practice the fine arts. An experienced painter at once detects a mannerism in colouring, combinations and contrasts of light and shade, and peculiarities of form, proportion, or position, which infallibly escape a person of more limited experience.

Dr. Reid speaks on this subject in the following characteristic manner.—“Not only men, but children, idi-

etc., and brutes, acquire by habit many perceptions which they had not originally. Almost every employment in life hath perceptions of this kind that are peculiar to it. The shepherd knows every sheep of his flock, as we do our acquaintance, and can pick them out of another flock one by one. The butcher knows by sight the weight and quality of his beeves and sheep before they are killed. The farmer perceives by his eye, very nearly the quantity of hay in a rick, or of corn in a heap. The sailor sees the burden, the built, and the distance of a ship at sea, while she is a great way off. Every man, accustomed to writing, distinguishes acquaintances by their handwriting, as he does by their faces. And the painter distinguishes, in the works of his art, the style of all the great masters. In a word, acquired perception is very different in different persons, according to the diversity of objects about which they are employed, and the application they bestow in observing them.*

§. 210. *Whether the mind can attend to more than one object at the same time.*

In connection with what has been said in this chapter, we are in some degree prepared to consider the question, Whether the mind can attend to more than one thing at one and the same instant? The question can perhaps be stated more clearly thus; Whether the mind can attend at one and the same instant to objects, which we can attend to separately?—The question, when proposed as here, without any limitation, hardly admits a discussion. If a rose is presented to us, we can handle it; we can inhale its fragrance, and behold its colours at the same moment. The mind exists in the states of seeing, smelling, and feeling at once; that is to say, it is in a complex state. Whereas if the question, as above stated, were answered in the negative, complexity in the states of the mind would be an impossibility.

But the question may be further simplified, and propo-

* Reid's Inquiry into the Human Mind, Chap. vi, §. 20.

subitus, viz. Whether we can, by means of one and the same sense, simultaneously notice and attend to more than one object, which objects that sense is capable of attending to separately?—When the question is modified and stated in this way, it seems to be the general sentiment, that the mind notices only one thing at a time.

§. 211. *On attending at the same time to different parts of music.*

But there are certain facts, which at first sight contradict this doctrine, however generally it may have been entertained. For instance, it is the opinion with very many persons, that, in a concert of music, a good ear can attend to different parts at the same time, and feel the full effect of the harmony. It is not denied, that they are fully able to feel the effect of the harmony; and it is also admitted, that they appear to attend to the different parts, which combine to form that harmony, at one and the same instant. But this appearance, (for we conceive it to be merely such,) is to be thus explained.

It has appeared in the course of this chapter, that our sensations and external perceptions are susceptible of being strengthened and quickened. By various examples it has been seen, that they can be brought to an astonishing degree both of acuteness and rapidity of exercise. We may suppose, therefore, that a HABIT has been formed in the case under consideration, and that the mind passes from one part of the music to the other with such quickness, as to give us no perception of an interval of time. The operation is so rapid, and the attention so slight, that there is no remembrance, and we are unable to recal the mental acts. Hence we shall seem to be attending to all the parts at once. The apparent result will be the same, as if this were actually the fact. But as this mere appearance may be otherwise satisfactorily explained, it is not necessary to admit the doctrine of originally coexistent perceptions of distinct and separate sounds.

Nor is this all. It is to be remembered, that, in the case under consideration, one sense only, the sense of hear-

being employed. And it is a natural inquiry, if it can attend to more than one object at once, which it is capable of attending to separately, why may it not attend to three, five, twenty, or more? An objection certainly arises here; and furthermore, the opinion, that the mind can simultaneously attend to separate objects by means of a single sense, strikes at the root of what there is abundant reason to consider a great and fixed law of our nature; viz. That the first intimations from the separate senses are simple, are uncompounded.

§. 212. *The principle considered in reference to the outlines and forms of objects.*

The inquiry, which has just been attended to, may be considered in reference to the outlines and forms of bodies. In discussing the subject of attention, Mr. Stewart, in connection with his views on that subject, introduces some remarks in respect to vision. He makes this supposition, That the eye is fixed in a particular position, and the picture of an object is painted on the retina. He then starts this inquiry; Does the mind perceive the complete figure of the object at once, or is this perception the result of the various perceptions we have of the different points in the outline?—He holds the opinion, that the perception is the result of our perceptions of the different points in the outline, which he adopts as naturally consequent on such views, as the following. The outline of every body is made up of points or smallest visible portions; no two of these points can be in precisely the same direction; therefore, every point by itself constitutes just as distinct an object of attention to the mind, as if it were separated by some interval of empty space from all the other points. The conclusion, therefore, is, as every body is made up of parts, and as the perception of the figure of the whole object implies a knowledge of the relative situation of the different parts with respect to each other, that such perception is the result of a number of different acts of attention.

But if we adopt this ingenious explanation of Mr.

Stewart, it is incumbent upon us to show how it happens, that we appear to see the object at once? The answer is, that the acts of perception are performed with such rapidity, that the effect with respect to us is the same, as if it were instantaneous. A habit has been formed; the glance of the mind, in the highest exercise of that habit, is indescribably quick; there is no remembrance; time is virtually annihilated; and separate moments are to our apprehension of them crowded into one.

§. 213. *Notice of some facts which favour the above doctrine.*

There are various facts, which go to confirm Mr. Stewart's doctrine as to the mode of the perception of external objects.—When we look for the first time on any object, which is diversified with gaudy colours, the mind is evidently perplexed with the variety of perceptions which arise; the view is indistinct, which would not be the case, if there were only one, and that an immediate perception. And even in paintings, which are of a more laudable execution, the effects at the first perception will be similar.—But there is another fact, which comes still more directly to the present point. We find, that we do not have as distinct an idea, at the first glance, of a figure of an hundred sides, as we do of a triangle or square. But we evidently should, if the perception of visible figure were the immediate consequence of the picture on the retina, and not the combined result of the separate perceptions of the points in the outline. Whenever the figure is very simple, the process of the mind is so very rapid, that the perception seems to be instantaneous. But when the sides are multiplied beyond a certain number, the interval of time necessary for these different acts of attention becomes perceptible. We are then distinctly conscious, that the mind labours from one part of the object to another, and that some time elapses before we grasp it as a whole.

CHAPTER EIGHTH.

MUSCULAR HABITS.

§. 214. *Instances in proof of the existence of muscular habits.*

From habits, considered as affecting the senses, the transition is easy to MUSCULAR HABITS. On this subject therefore we shall now offer a few remarks.—Of the fact, that such habits exist, it is presumed no doubt can be generally entertained. Muscular habits may be detected in the gait and in the speech of men generally ; they are found with specific characteristics in particular classes of men ; every mechanic forms them, and they vary in their aspect with his particular business. Hence the enlarged and powerful neck of the porter, the strong and brawny arm of the blacksmith, and the particular habitudes of all their movements.

But we will not delay on this part of the subject any farther than to point out a familiar instance of it. It is one of the most general kind, is of the most common occurrence, and yet perhaps has not often been made the subject of particular attention.—Every man's handwriting is an instance, and a proof of Muscular habit. In acquiring that art, the muscles have undergone a complete system of instruction. That instruction and training they practically and most punctually regard ever afterwards ; so much so that we can tell a man's writing, to which we

are accustomed, almost as readily as we recognize the man himself when we see him.—But this subject is introduced here, although the train of thought naturally led to it, not so much for its own sake, as in consequence of its connection with Volition.

§. 215. *Considered by some writers to be involuntary.*

It seems to have been the opinion of some writers, (among others of Drs. Reid and Hartley,) that bodily or muscular habits operate in many cases without design and volition on the part of the person, who has formed them; and that as they are without any attendant thought, without any preceding mental operation, such bodily acts are to be considered as purely mechanical or automatic. They endeavour to explain and confirm their views by the instance of a person, learning to play on the harpsichord. When a person first begins to learn, it is admitted by all, that there is an express act of volition, preceding every motion of the fingers. By degrees the motions appear to cling to each other mechanically; we are no longer conscious of volitions, preceding and governing them. In other words, there is nothing left but the motions; there is no act of the mind; the performance, admirable as it is, has the same character and the same merit with that of the action of a well-contrived machine.

§. 216. *Objections to the doctrine of involuntary muscular habits.*

In replying to these views, it may be safely admitted, that, in playing the harpsichord and some other musical instruments, we have not always a distinct remembrance of volitions, and consequently the muscular effort has sometimes the appearance of being independent of the will. But this mere appearance is not sufficient to command our assent to the doctrine advanced by these writers, until the four following objections be set aside.

(1) The supposition, that the acts in question are automatic, is unnecessary. If it be true, as we have repeat-

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edly seen so much occasion to believe, that Habit is a general law of our nature, then it may be regarded as applicable not only to the muscular efforts, but to the preceding volitions themselves. It is implied in this view, (supposing it to be a correct one,) that such volitions may be very rapid, so as scarcely to arrest our attention a moment. Now the natural result of such slight attention will be, that they will exist and pass away without being remembered. These considerations are sufficient to explain the mere appearance, which is admitted to exist, but which Reid and Hartley attempt to explain by an utter denial of the putting forth of volitions at all. But if this be the case, then the supposition, that the acts in question are automatic and involuntary, is an unnecessary one.

(2.) The most rapid performers are able, when they please, to play so slowly, that they can distinctly observe every act of the will in the various movements of the fingers. And when they have checked their motions so as to be able to observe the separate acts of volition, they can afterwards so accelerate those motions, and of course so diminish the power, (or what may be regarded as the same thing, the time of attending to them,) that they cannot recal the accompanying volitions. This is the rational and obvious supposition, that there is not an exclusion of volitions, but an inability to recollect them, on account of the slight degree of attention. Any other view necessarily implies an inexplicable jumble of voluntary and involuntary actions in the same performance.

(3.) If there be no volitions, the action must be strictly and truly automatic; that is, it must, from the nature of the case, be the motion of a machine. It must always go on invariably in the same track, without turning to the right hand or to the left. If this be the case in playing the harpsichord, which is by no means probable, it is certainly not in some other instances of habits. It must be supposed, that there is as much rapidity of volition put forth by the rope-dancer, the equilibrist, the equestrian actor of the circus, &c. as by the player on the harpsichord. Now if it be admitted, that the ordinary steps of the sin-

gular and surprizing feats they perform are familiar to them, still the process is evidently not an invariable one. It may be pronounced impossible for them to perform experiments, which agree in every particular with preceding experiments. They are necessarily governed in their volitions and movements by a variety of circumstances, which arise on every particular occasion, and which could not be foreseen. Hence the muscular movements in these cases, being controlled by the will, are not mechanical; and as we have abundant reason to believe them often not less rapid in the performance, than the muscular movements are in playing the harpsichord, why should we consider these last mechanical and not voluntary?

(4) If the hypothesis of Reid and Hartley be true, then there is some general tendency or principle in our nature, by which actions originally voluntary are converted into mechanical actions. Nor will it be easy to show, why this principle should not extend further than mere bodily movements. It will be the result of this tendency to wrest all those powers which it reaches, whether bodily or mental, from the control of the will. In other words, when we consider the extent of its application, and its wonderful results, wherever it applies, we must conclude, that this principle will infallibly make men machines, mere automats, before they have lived out half their days.—Such are some of the objections to the doctrine, that muscular habits are involuntary.

CHAPTER NINTH.

CONCEPTIONS.

§. 217. *Meaning of conceptions and how they differ from certain other states of the mind.*

WE are now led, as we advance in the general subject of intellectual states of EXTERNAL ORIGIN, to contemplate the mind in another view, viz, as employed in giving rise to what are usually termed CONCEPTIONS. Without professing to propose a definition in all respects unexceptionable, we are entitled to say in general terms, that this name is given to any reexisting sensations whatever, which the mind has felt at some former period, and to the notions, which we frame of absent objects of perception. Whenever we have conceptions, our sensations and perceptions are replaced, as Shakspeare expresses it, in the "mind's eye," without our at all considering at what time, or in what place they first originated. In other words, they are revived or recalled, and nothing more.

Using therefore the term CONCEPTIONS to express a class of mental states, and in accordance with the general plan, having particular reference in our remarks here to such as are of external origin, it may aid in the better understanding of their distinctive character, if we mention more particularly, how they differ both from sensations and perceptions, and also from remembrances, with which last some may imagine them to be essentially the same.

I,—Conceptions differ from the ordinary sensations and perceptions in this respect, that both their causes and their objects are absent. When the rose, the honeysuckle, or other odoriferous body is presented to us, the effect, which follows in the mind, is termed a sensation. When we afterwards think of that sensation, (as we sometimes express it,) when the sensation is recalled even though very imperfectly, without the object which originally caused it being present, it then becomes, by the use of language, a conception. And it is the same in any instance of perception. When, in strictness of speech, we are said to perceive any thing, as a tree, a building, or a mountain, the objects of our perceptions are in all cases before us. But we may form conceptions of them, they may be recalled and exist in *the mind's eye*, however remote they may be in fact, both in time and place.

II, They differ also from remembrances or ideas of memory. We take no account of the period, when those objects, which laid the foundation of them, were present; whereas in every act of the memory there is combined with the conception a notion of the past. Hence as those states of mind, which we call conceptions, possess these distinctive marks, they are well entitled to a separate name.

CONCEPTIONS being merely mental states or acts of a particular kind are regulated by the general laws of the intellect, and make their appearance and disappearance on the principles of association. Those principles have been explained in a former chapter.—Whenever at any time we may use the phrase “power of conception” or “faculty of conception,” nothing more is to be understood by such expressions than this, that there is in the mind a susceptibility of feelings or ideas possessing the marks, which we have ascribed to this class.

§. 218. *Of conceptions of objects of sight.*

One of the striking facts in regard to our conceptions is, that we can far more easily conceive of the objects of some senses than of others. Suppose a person to have

travelled abroad, and to have seen among the achievements of human effort St. Peter's church, the Vatican, and the Pyramids, or to have visited among nature's still greater works the cataract of Niagara and the falls of St. Anthony, or any other interesting object of sight ; it is well known, that the mind of this person afterwards even for many years very readily forms a conception of those objects. Such ideas are so easily and so distinctly recalled, that it is hardly too much to say of them, that they seem to exist as permanent pictures in the mind. It is quite different with a particular sound, which we have formerly heard, and with a particular taste, or any pleasant or painful sensations of the touch, which we have formerly experienced. When the original perceptions have in these last cases departed, we find that the ideas do not readily exist again in the absence of their appropriate objects, and never with the distinctness, which they possessed at first. Ideas of visible objects, therefore, are more readily recalled, or we can more easily form conceptions of such objects, than we can of the objects of the other senses.—This peculiarity in the case of visible objects may be thus partially explained.

Visible objects or rather the outlines of them are complex ; that is, they are made up of a great number of points or very small portions. Hence the conception, which we form of such an object as a whole, is aided by the principles of association. The reason is obvious. As every original perception of a visible object is a compound, made up of many parts, whenever we subsequently have a conception of it, the process is the same ; we have a conception of a part of the object, and the principles of association help us in conceiving of the other parts. Association connects the parts together ; it presents them to the mind in their proper arrangement, and helps to sustain them there.

We are not equally aided by the laws of association in forming our conceptions of the objects of the other senses. When we think of some sound, or taste, or touch, the object of our conception is either a single detached

sensation, or a series of sensations. In every such detached sound, or taste, or sensation of touch, whether we consider it at its first origin or when it is subsequently recalled, there is not of course that association of the parts, which we suppose to exist in every visual perception, and which must exist also in every conception of objects of sight, which subsequently takes place. Accordingly our conceptions of the latter objects arise more readily, and are more distinct than of the others.—There is a greater readiness and distinctness also, when there is a series of sensations and perceptions, for the visual conceptions are aided by association both in time and place, but the others only in time.

§. 219. *Of the influence of habit on our conceptions.*

It is another circumstance worthy of notice in regard to conceptions, that the power of forming them depends in some measure on habit.—A few instances will help to illustrate the statement, that what is termed Habit may extend to the susceptibility of conceptions; and the first to be given will be of conceptions of sounds. Our conceptions of sounds are in general very indistinct, as appeared in the last section. But a person may acquire the power of amusing himself with reading written music. Having frequently associated the sounds with the notes, he has at last such a strong conception of the sounds, that he experiences, by merely reading the notes, a very sensible pleasure. It is for the same reason, viz, because our associations are strengthened by habit, that readers may enjoy the harmony of poetical numbers without at all articulating the words. In both cases they truly hear nothing, but there is a virtual melody in the mind.

That our power of forming conceptions is strengthened by habit is capable of being further illustrated from the sight. A person, who has been accustomed to drawing, retains a much more perfect notion of a building, landscape, or other visible object, than one who has not. A portrait painter, or any person, who has been in the practice of drawing such sketches, can trace the outlines of the human form with very great ease; it requires hardly

more effort from them than to write their names.—This point may also be illustrated by the difference, which we sometimes notice in people in their conceptions of colours. Some are fully sensible of the difference between two colours when they are presented to them, but cannot with confidence give names to these colours when they see them apart, and may even confound the one with the other. Their original sensations or perceptions are supposed to be equally distinct with those of other persons; but their subsequent conception of the colours is far from being so. This defect arises partly at least from want of practice, that is, from the not having formed a habit. The persons, who exhibit this weakness of conception, have not been compelled by their situation, nor by mere inclination, to distinguish and to name colours so much as is common.

§. 320. *Of the subserviency of our conceptions to description.*

It is highly favourable to the talent for lively description, when a person's conceptions are readily suggested and are distinct. Even such an one's common conversation differs from that of those, whose conceptions arise more slowly, and are more faint. One man, whether in conversation or in written description, seems to place the object, which he would give us an idea of, directly before us; it is represented distinctly and to the life. Another, although not wanting in a command of language, is confused and embarrassed amid a multitude of particulars, which, in consequence of the feebleness of his conceptions, he finds himself but half acquainted with; and he, therefore, gives us but a very imperfect notion of the thing which he would describe.

It has been by some supposed, that a person might give a happier description of an edifice, of a landscape, or other object, from the conception than from the actual perception of it. The perfection of a description does not always consist in a minute specification of circumstances; in general the description is better, when there is a judicious selection of them. The best rule for making the se-

lection is, to attend to the particulars, that make the deepest impression on our own minds, or, what is the same thing, that most readily and distinctly take a place in our conceptions.—When the object is actually before us, it is extremely difficult to compare the impressions, which different circumstances produce. When we afterwards conceive of the object, we possess merely the outline of it; but it is an outline made up of the most striking circumstances. Those circumstances, it is true, will not impress all persons alike, but will somewhat vary with the degree of their taste. But when with a correct and delicate taste any one combines lively conceptions, and gives a description from those conceptions, he can hardly fail to succeed in it.

§. 221. *Of conceptions attended with a momentary belief.*

Our conceptions are sometimes attended with belief; when they are very lively, we are apt to ascribe to them a real outward existence, or believe in them. We do not undertake to assert, that the belief is permanent; but a number of facts strongly lead to the conclusion, that it has a momentary existence.

(1) A painter, in drawing the features, and bodily form of an absent friend, may have so strong a conception, so vivid a mental picture, as to believe for a moment that his friend is before him. After carefully recalling his thoughts at such times and reflecting upon them, almost every painter is ready to say, that he has experienced some illusions of this kind. It is true, the illusion is very short, because the intensity of conception, which is the foundation of it, can never be kept up long when the mind is in a sound state. Such intense conceptions are unnatural. And, further, all the surrounding objects of perception, which no one can altogether disregard for any length of time, every now and then check the illusion and terminate it.

(2) When a blow is aimed at any one, although in sport, and he fully knows it to be so, he forms so vivid a conception of what might possibly be the effect, that his belief is for a moment controlled, and he unavoidably shrinks

back from it.——Again, place a person on the battlements of a high tower; his reason tells him he is in no danger; he knows he is in none. But after all he is unable to look down from the battlements without fear; his conceptions are so exceedingly vivid as to induce a momentary belief of danger in opposition to all his reasonings.

(3) When we are in pain from having struck our foot against a stone, or when pain is suddenly caused in us by any other inanimate object, we are apt to vent a momentary rage upon it. That is to say, our belief is so affected for an instant, that we ascribe to it an accountable existence, and would punish it accordingly. It was an impulse of human nature, (though doubtless human nature in its weakness,) when Xerxes, falling into a transport of rage with the Hellespont for having broken up and washed away his bridge, ordered it to be beaten with three hundred stripes. It is on the principle of our vivid conceptions being attended with belief, that poets so often ascribe life, and agency, and intention to the rains and winds, to storms, and thunder, and lightning. How natural are the expressions of King Lear, overwhelmed with the ingratitude of his daughters, and standing with his old head bared to the pelting tempest!

“Not rain, wind, thunder, fire are my daughters,

“I tax not you, ye elements, with unkindness;

“I never gave you kingdoms, called you children.”

(4) There are persons, who are entirely convinced of the folly of the popular belief of ghosts and other nightly apparitions, but who cannot be persuaded to sleep in a room alone, nor go alone into a room in the dark. Whenever they happen out at night, they are constantly looking on every side; their quickened conceptions behold images, which never had any existence except in their own minds, and they are the subjects of continual disquiet and even terror.

“It was my misfortune, (says Dr. Priestly,) to have the idea of darkness, and the ideas of invisible malignant spirits and apparitions very closely connected in my infancy; and to this day, notwithstanding I believe nothing

of these invisible powers, and consequently of their connection with darkness, or any thing else, I cannot be perfectly easy in every kind of situation in the dark, though I am sensible I gain ground upon this prejudice continually."

In all such cases we see the influence of the prejudices of the nursery. Persons, who are thus afflicted, were taught in early childhood to form conceptions of ghosts, hobgoblins, and unearthly spirits; and the habit still continues. It is true, when they listen to their reasonings and philosophy, they may well say that they do not believe in such things. But the effect of their philosophy is merely to check their belief; not in one case in a thousand is the belief entirely overcome. Every little while, in all solitary places, and especially in the dark, it returns and when banished returns again; otherwise we cannot give an explanation of the conduct of these persons.

§. 222. *Conceptions which are joined with perceptions.*

The belief in our mere conceptions is the more evident and striking, whenever they are at any time joined with our perceptions.—A person walking in a field, (to take a familiar instance and which every one will understand,) in a thick foggy morning, perceives something, no matter what it is; but he believes it to be a man, and does not doubt it. In other words, he truly perceives some object, and, in addition to that perception, has a mental conception of a man, attended with belief. When he has advanced a few feet further, all at once he perceives, that what he conceived to be a man is merely a stump with a few large stones piled on its top. He perceived at first, as plainly or but little short of it, that it was a stump, as in a moment afterwards; there were the whole time very nearly the same visible form and the same dimensions in his eye. But whatever he had in his eye, he certainly had in his mind the conception of a man, which overruled and annulled the natural effects of the visual perception; the conception being associated with a present visible object acquired peculiar strength and permanency, so much so that he

truly and firmly believed, that a human being was before him. But the conception has departed ; the present object of perception has taken its place, and it is now impossible for him to conjure up the phantom, the reality of which he but just now had no doubt of.

In his Voyage of Discovery to the Arctic Regions, Capt. Ross mentions an incident, illustrative of the power and fruitfulness of our conceptions, when upheld by the actual presence of objects. It will be recollected, that the immense masses of ice, which are found floating in the polar seas, often display a variety of the most brilliant hues. Speaking of one of these ice-bergs as they are called, which he early fell in with, and which was about forty feet high and a thousand feet long, "imagination, he says, painted it in many grotesque figures ; at one time it looked something like a white lion and horse rampant, which the quick fancy of sailors, in their harmless fondness for omens, naturally enough shaped into the lion and unicorn of the king's arms, and they were delighted accordingly with the good luck it seemed to augur."

But it is unnecessary to resort to books for illustrations of this topic. Multitudes of persons have a conceptive facility of creations, which is often troublesome and perplexing ; especially in uncommon situations, and in the night. And in all cases this tendency is greatly strengthened, whenever it can lay hold of objects, the outlines of which it can pervert to its own purposes.

Many a person has waked up in the night and has firmly believed, that he saw a form clothed in white, standing in an erect position at some part of the room, but in a moment after the imaginary visitant has vanished, and there is nothing left but the reflection of the moonbeams on the wall.

In all cases of this kind, where the conceptions are upheld, as it were, by present objects of perception, and receive a sort of permanency from them, nothing is better known, than that we often exercise a strong and unhesitating belief. These instances, therefore, can properly be

considered as illustrating and confirming the views in the preceding section.

§. 223. *Of our conceptions at tragical representations.*

These observations suggest an explanation, at least in part, of the effects, which are produced on the mind by exhibitions of fictitious distress. In the representation of tragedies, it must be admitted, that there is a general conviction of the whole being but a fiction. But, although persons enter the theatre with this general conviction, it does not always remain with them the whole time. At certain passages in the poet peculiarly interesting, and at certain exhibitions of powerful and well-timed effort in the actor, this general impression, that all is a fiction, fails. The feelings of the spectator may be said to rush into the scenes; he mingles in the events; carried away and lost, he for a moment believes all to be real, and the tears gush at the catastrophe which he witnesses. The explanation, therefore, of the emotions felt at the exhibition of a tragedy, such as indignation, pity, and abhorrence, is, that at certain parts of the exhibition we have a momentary belief in the reality of the events, which are represented. And after the illustrations which have been given, such a belief cannot be considered impossible.—The same explanation will apply to the emotions, which follow our reading of tragedies when alone, or any other natural and affecting descriptions. In the world of conceptions, which the genius of the writer conjures up, we are transported out of the world of real existence, and for a while fully believe in the reality of what is only an incantation.

§. 224. *Application of these principles to diversities in the mental character of individuals.*

It is a remark sometimes made, that the sanguine are apt to believe and assert what they hope; and the timorous what they fear. This remark implies, and is founded in part on what every one knows, that there are diversities in the mental character of different individuals. Some are constitutionally fearful; every obstacle assumes

an undue importance, and every terror is magnified. Others are confident, fearless, ardent. Both of these classes of persons are known to commit frequent mistakes in judging of those things, which are future, and which have any connection with their respective mental characteristics.

The remarks, which were made in the three last sections, will help us to an explanation in this thing.—As to what is called BELIEF, it is presumed no one can be ignorant of it, although it would be futile to attempt to explain it by words. It is, however, important to remark, that belief is regulated and controlled, not by direct volition, but by the nature of the circumstances, which are placed before the mind. But it has been already sufficiently shown, that belief is in a measure under the control of our conceptions, when they are very vivid. It is also undoubtedly true, that vividness of conceptions is always attended with a strong feeling of pleasure, or of desire, or of some other kind. But it is implied in the mental characters of the persons, on whom we are remarking, that their feelings are strong, though opposite; in the one case, confident and ardent; in the other, dejected and timid.

Hence their conceptions will be strong. To the one, all difficulties and dangers will be magnified; to the other, the glory and the fruition of success. And as these distorted conceptions necessarily control more or less their belief, it will follow, that perfect reliance is not to be placed on their opinions, when they are directly connected either with their hopes or their fears. Nor will such distrust always imply an unfavourable opinion of the rectitude of their intentions.—(See, in connection with this subject, Reid's *Essays on the Intellectual Powers*, IV.; Stewart's *Elements*, CH. III.; Brown's *Lectures*, XLI; Priestley's *Examination of Reid*, SECT. VIII.; Kaime's *Elements of Criticism*, CHAP. II., &c.)

CHAPTER TENTH.

CASUAL ASSOCIATIONS.

§. 225. *Association sometimes misleads our judgments.*

It is necessary in this part of the history of the mind, to refer again particularly to the great law of Association. There are some cases, where the power of association so misleads us, that we cannot easily form a correct judgment of the true nature of things. Every object of thought, in order to be fully understood, ought to be so much in our power, that we may examine it separately from all other objects. Whenever, therefore, it happens from any circumstances, that the power of association so combines one object of thought with another, that the object cannot readily be looked at and examined by itself, it so far has the effect to perplex and hinder correct judgment.

It will be found, when we look into our minds, that there exist a few associations or combinations of thought of this kind, which are obstinate and almost invincible. To explain the origin, and to correct the erroneous tendencies of all such connections of thought, although the number of such as we have now in view cannot be large, would occupy us too long. The examination of a few somewhat striking instances will not only throw light on the philosophy of the mind in general, but will be of some practical benefit.—Other instances of CASUAL ASSOCIA-

tion, which have a less degree of strength, and exert a less considerable influence in disturbing the just exercise of the intellect, will require some examination hereafter. The whole subject of Prejudices, which has a conspicuous place in every practical system of Mental Philosophy, is necessarily taken up in a great degree with such cases.

§. 226. *Casual association in respect to the place of sensation.*

One of the casual associations of that extreme kind, which we have now especial reference to, concerns the place, or rather the supposed place of sensation. — All sensation, it will not be forgotten, is in the mind. Whatever is inanimate or material can of course have no feeling. Nevertheless if a wound be inflicted on the hand or foot, we seem to experience the sensation of pain at that particular place. When we merely bring the hand in contact with a warm or cold body, we even then acquire a local habitation to the subsequent feeling, and it nearly seems to be, not in the mind, but in the hand.

This reference of the sensation to the vulgar organs and place, instead of thinking of it as existing in the mind, is the result of an early and strong association. As the wound in the hand for instance is the cause of the painful feeling, the consequence is, that the sensation and the place whence it arose, constantly go together in our thoughts. The result of this association which has been repeated and continued from our youth up, is that we find it extremely difficult in such life as requires it, even with the greatest effort. So difficult is it, that a soldier, whose arm or leg has been amputated, still complains of feeling pain in those limbs, though they are now forever buried in the earth or the depths of the sea.

Although we are liable in these cases to be at times in mistake, if we do not guard against it with care, it is perhaps an obvious remark, that the formation of this inability to errour is laid in our constitution for wise ends. It is not ordinarily so important, as is generally supposed of view, that we should attend to the most trifling, or

to the external part which is affected. An injury in the external senses, the muscles, or the limbs, if it be not attended to, soon affects other parts of the body and even life itself. Hence Providence has put us in the way to form this strong and almost unconquerable mental habit, in order to secure protection, where it seems to be most urgently and frequently needed.

§. 227. *Connection of our ideas of extension and time.*

If we examine carefully our notions of Time, we shall find here also a CASUAL ASSOCIATION of long continuance and of great strength. It is believed to be the fact, that Time, as it exists in the apprehensions of most persons, is regarded as something extended. It is not necessary to delay here to undertake a definition of time, to show what it is in the abstract, or to give a history of the notion which we form of it. Taking it for granted, that every one knows what is meant when we use that term, we merely assert here, that for some cause or other it is exceedingly difficult to think of it, except in the light of a modification of EXTENSION. The correctness of this remark may not perhaps appear perfectly obvious at first; but the expressions, which we apply to intervals of duration, are an evidence of its truth.

We say *before* such a time or *after* such a time, the same as before or after any material object ; we speak of a *long* or a *short* time with no more hesitation than of a long or short distance, of a long or short bridge, or railway, or any other object of extension. We utter ourselves precisely in the same way we should do, if we were certain of having detected some real analogy between the two, between length and shortness in material substances, and what are called length and shortness in time. But it is not too much to say, that there is no such analogy, no such similitude ; nor is it worth while to anticipate, that we shall ever be able to detect such analogy or similitude, until we can in practice apply the measures of feet, ells, rods, &c. to hours, and days, and weeks. How then can it be accounted for, that we apply terms nearly in the

same way, as if this were the case, and, as if such measurements could be made?

The strong association of these ideas has most probably arisen in this manner, viz. from our constantly measuring one of them quantities by the other. It is the common method to measure time by motion, and motion is measured by extension. In an hour the hand of a clock moves over a certain space; in two hours over double the space, and so on.—No doubt it is convenient to apply the terms “long” and “short,” “before” and “after,” and others similar, to time. We could not well dispense with them. But it ought to be remembered, if we would have right notions of things, that the application of those expressions has arisen from the mode in which we measure time, and that time and extension are essentially distinct in their nature.

§. 228. *Of high and low notes in music.*

We speak of high and low in reference to notes in music, the same as of the high or low position of material bodies. There is supposed to be some analogy between the relation, which the notes in the scale of music bear to each other, and the relation of superiority and inferiority in the position of bodies of matter. But it is impossible to prove the existence of such analogy, however generally it may have been supposed; and the supposition itself of its existence has no doubt arisen from a casual association of ideas, which has acquired strength by lapse of time and by repetition.

A proof of this association of ideas being purely accidental is that an association, the very reverse of this, was once prevalent.—It is remarked in the preface to Gregory's edition of Euclid's works, that the more ancient Greek writers considered the grave sounds as high, and the acute ones as low. The present mode of speaking on the subject is of more recent origin; but at what time and in what way it was introduced cannot be asserted with confidence. In the preface just referred to, it is, however, observed, that the ancient Greek custom of looking upon

the grave sounds as high and the acute as low, precisely the reverse of what is now common, continued down until the time of Boethius. It has been conjectured with some ingenuity, that this connection or association of thought among the Greeks and Romans, for it was equally prevalent among both, might have been owing to the construction of their musical instruments. The string, which sounded the grave or what we call the low tone, it has been supposed, was placed highest, and that, which gave the shrill or acute, had the lowest place. If this conjecture could be ascertained to be well founded, it would strikingly show, from what very slight causes strong and permanent associations often arise. It is hardly necessary to observe, that it is important to examine the origin and progress of such associations, in order that we may correct those erroneous and illusive notions, which will be found to be built upon them.*

§. 229. *Connection of the ideas of extension and colour.*

There is no necessary connection between colour, as the term is commonly employed by philosophers, and extension. The word COLOUR properly denotes a sensation in the mind ; the word EXTENSION, the quality of an external, material object. There is, therefore, no more natural connection, and no more analogy between the two, than there is between pain and solidity. And yet it so happens that we never have the sensation or idea of colour without at the same time associating extension with it; we find them, however different they may be in their na-

* It is not necessary for any purpose we have in view here to trace the origin of the association, but it is undoubtedly the fact, that we almost invariably attribute the notion of highness or loftiness to those, who excel, or are particularly favoured in any respects. We can hardly think of a nobleman, prince, or king, without creating for them an imaginary orbit somewhere in the upper sky, where they revolve far above the heads of ordinary mortals. Hence the expressions, High rank, High birth, Elevated genius, Superior talents, &c. and their opposites, Low rank, Inferior genius, and the like. — (See Stewart's Essays, II, ch. III, Kaine's Criticism, Part VII, ch. IV.)

ture, inseparable in our thoughts. This strong association is formed in consequence of our always perceiving extension at the very time, in which the sensation of colour is excited in the mind. The perception of the one, and the sensation of the other have been so long simultaneous, that we have been gradually drawn into the belief, that, on the one hand, all colour has extension, and on the other, all extension has colour. But what we call colour being merely a state of the mind, it is not possible, that it should with propriety be predicated of any external material substances. Nor is it less evident, if colour be merely a sensation or state of the mind, that matter can exist, and does exist without it.

But what has been said will not satisfy all the queries, which may be started on this point, unless we remark also on the ambiguity in the word colour. The view, which has been taken of the connection between colour and extension, is founded on the supposition, that colour denotes a sensation of the mind, and that merely. It seems to be supposed by some writers, that the word colour has two meanings, and that it is thus generally understood ;—(1) It denotes that disposition, or arrangement, or whatever it may be, in the particles of matter, which not only causes the rays of light to be reflected, but to be reflected in different ways ;—(2) It denotes that mental sensation, which follows, when the rays have reached the retina of the eye. When people use the term with this diversity of signification they can say with truth, that external bodies have colour, and also that colour is a sensation of the mind. It may be said also in the first sense of the term, which has been mentioned, that colour has extension, because particles of matter have extension. But it is not altogether evident, that people generally make this distinction, although some may. There is great reason to think, that they commonly mean by the term the *appearance* of colour or the sensation in the mind ; and they no doubt in general regard this appearance or sensation, as belonging to external objects, as being in some sense a part of those ob-

jects, and as having extension. How erroneous this supposition is, has already appeared !

§. 230. *Tendency of the mind to pass from the sign to the thing signified.*

Mr. Stewart gives a reason for our inattention to the internal sensation of colour, (or colour considered as an affection of the mind,) which is worthy of some notice. The principle, it will be observed, is a general one, applicable to other cases as well as this.—“ It is well known (he says) to be a general law of our constitution, when one thing is destined, either by nature or by convention, to be *the sign* of another, that the mind has a disposition to pass on, as rapidly as possible, to the thing signified, without dwelling on *the sign* as an object worthy of its attention. The most remarkable of all examples of this occurs in the acquired perceptions of sight, where our estimates of distance are frequently the result of an intellectual process, comparing a variety of different signs together, without a possibility on our part, the moment afterwards, of recalling one single step of the process to our recollection. Our inattention to the sensations of colour, considered as affections of the Mind, or as modifications of our own being, appears to me to be a fact of precisely the same description ; for all these sensations were plainly intended by nature to perform the office of signs, indicating to us the figures and distances of things external. Of their essential importance in this point of view, an idea may be formed, by supposing for a moment the whole face of nature to exhibit only one uniform colour, without the slightest variety even of light and shade. Is it not self evident that, on this supposition, the organ of sight would be entirely useless, inasmuch as it is by the *varieties* of colour alone that the outlines or visible figures of bodies are so defined as to be distinguishable one from another ? Nor could the eye, in this case, give us any information concerning diversities of *distance* ; for all the various signs of it, enumerated by optical writers, presuppose the antecedent recognition of the bodies around us, as separate objects of

perception. It is not therefore surprising, that signs so indispensably subservient to the exercise of our noblest sense, should cease, in early infancy, to attract notice as the subjects of our consciousness; and that afterwards they should present themselves to the imagination rather as qualities of Matter, than as attributes of Mind.”*

§. 231. *Whether there be heat in fire, &c.*

The questions, Whether there be heat in fire, coldness in snow, sweetness in sugar, and the like, seem well suited to the inquisitive and nicely discriminating spirit of the Scholastic ages. Although well adapted to exercise the ingenuity of the Schools, they are far from being without some importance in the more practical philosophy of later times. If these questions concern merely the matter of fact, if the inquiry be, What do people think on these points? It admits of different answers. But this is of less consequence to be known, than to know what is the true view of this subject.

The following, there is much reason to think, is the view, which should be taken. If by heat, cold, and taste in bodies, we merely mean, that there is this or that disposition or motion or attraction in the particles, then it must clearly be granted, that fire is hot, that snow is cold, and sugar is sweet. But if by heat is understood what one feels on the application of fire to the limbs, or if by sweetness is understood the sensation of taste, when a sapid body is applied to the tongue, &c. then fire has no heat, sugar no sweetness, and snow is not cold. These states of the mind can never be transformed into any thing material and external. The heat or the cold which I feel, and the different kinds of tastes are sensations in the soul and nothing else.

§. 232. *Whether there be meaning in words?*

We say in our common discourse, that there is meaning in words, that there is meaning in the printed page of

* Stewart's Historical Dissertation Pt. I, SECT. II, CH. 2.

an author; and the language is perhaps sufficiently correct for those occasions, on which it is ordinarily employed. We do not deem it necessary to object to the common mode of speaking in this particular instance, nor to undertake to propose any thing better. But there is here an association of ideas, similar, both in its nature and its effects, to that existing between extension and colour already remarked upon.

When objects external to us are presented to the sense of sight, there is immediately the sensation of some colour. This sensation we have been so long in the habit of referring to the external object, that we speak and act, as if the colour were truly in that object and not in ourselves; in the language of D'Alembert, as if the sensation were transported out of the mind, and spread over the material substance. And it is not until we take some time to reflect, and until we institute a careful examination, that we become satisfied of our error.

In the same way when we look upon the page of an author we say it has meaning, or that it is full of thought; whereas in truth, in consequence of a long continued and obstinate association, of which we are hardly sensible ourselves, we transport the meaning or thought out of ourselves and spread it upon that page. The thought or meaning is in ourselves, but is placed by us, through the means of a casual but very strong association, in the written marks, which are before us. All the power, which the words have, results from convention, or, what is the same thing, exists in consequence of certain intellectual habits, formed in reference to those words. It is these habits, formed in reference to them, it is this mental correspondence, which gives these characters all their value; and without the mind, which answers to and which interprets them, they could be considered as nothing more than mere black strokes drawn upon white paper, and essentially differing in nothing from the zigzag and unmeaning delineations of a schoolboy on the sand. As all the beautiful variety of colours do not and cannot have an existence

without the mind, which has sensations of them or perceives them, so words are useless, are unmeaning, are nothing without the interpretations of an intellect, that has been trained up so as to correspond to them. Otherwise there would be meaning in the unknown inscriptions on the bricks brought from Babylon ; there would be meaning in those hieroglyphical figures on the monuments of Egypt, which have hitherto eluded the efforts to interpret them ; they would not stare upon us with the unintelligent vacancy of an idiot. They are now without meaning, without life and intelligence, for this reason and this only, that the minds, which once corresponded to them, and which gave them life and intelligence, are no more. By association, therefore, we refer the meaning to the written characters or words, when in truth it is in the mind, and there alone.

§. 233. *Benefit of examining such connections of thought.*

It is of great importance to us to be able to separate ideas, which our situation and habits may have intimately combined together. To a person, who has this power in a considerable degree, we readily give the credit of possessing a clear and discriminating judgment. And this mental characteristic is of great consequence not only in pursuing the study of intellectual philosophy, but in the conduct of life. It is in particular directly subservient to the power of reasoning, since all processes of reasoning are made up of successive propositions, the comparison of which implies the exercise of judgment. The associations of thought, which have been mentioned in this chapter, are so intimate or rather almost indissoluble, that they try and discipline the mind in this respect,—they teach it to discriminate. They are worthy to be examined, therefore, and to be understood, not only for the immediate pleasure, which they afford in the discovery of our errors ; but also because they have the effect of training up one's powers to some good purpose. Let a person be accustomed to making such discriminations as are implied in fully understanding the

CASUAL ASSOCIATIONS.

stances in this chapter, and he acquires a readiness, which is not easily outwitted; he trains himself to such quickness of perception in finding out what truly belongs to an object and what does not, as will not allow him to be imposed upon by that confusion of ideas, which in so many cases distorts the judgments of the multitude.

§. 234. *Power of the will over mental associations.*

In view of what has been said in this and in former chapters, the inquiry naturally arises, *What is the degree of influence, which we are able to exercise by mere will or volition over associated trains of thought? The answer to be given to this inquiry is, that we have no direct influence or power over them;—there is a constant train of ideas, but their succession, their coming and departing depends on causes beyond our immediate voluntary control.* The truth of the general statement, that we cannot produce or call up an idea by a mere direct act of the will, and that, consequently, trains of ideas are not directly under its control, cannot but appear quite evident on a little reflection. We never can will the existence of any thing without knowing what it is which we will or choose. This requires no further proof than is contained in the proposition itself. Therefore, the expressions, *to will to have a certain thought or train of thought, clearly imply the present existence of that thought or train; and, consequently, there can be no such thing as calling up and directing our thoughts by immediate volition.*

To this view of want of direct voluntary power over our associated ideas and to the argument in support of it those mental efforts, which we term recollection or intentional memory, have been brought up as an answer. *In cases of intentional memory it will be said, an object event is remembered, or, in other words, an idea or train of ideas is called up, by mere volition or choice. To this objection we make this reply. It is evident, before attempt or make a formal effort to remember the pa*

ular circumstances of an event, that the event itself in general must have been the object of our attention. There is some particular thing in all cases of intentional remembrance, which we wish to call to mind, although we are totally unable to state what it is ; but we know, that it is somehow connected with some general event, which we already have in memory. Now by revolving in mind the great facts or outlines of that event, it so happens, that the particular circumstance, which we were in search of, is called up. But certainly no one can say that this is done by a direct volition ;—so far from it, that nothing more is wanted to explain it, than the common principles of association. This statement is illustrated, whenever, in reciting an extract which we had committed to memory, we are at a loss for the beginning of a particular sentence. In such a case we naturally repeat a number of times the concluding words of the preceding sentence, and very soon we recall the sentence, which was lost ; not, however, by direct volition, but by association.

§. 235. *Associations controlled by an indirect voluntary power.*

But we would not be understood to say, that the will possesses no influence whatever over our trains of thought ; its influence is very considerable, although it is not, as we have seen, immediate and direct.—(1) We have, in the first place, the power of checking or delaying the succession of ideas. This power is always found to exist, when the direction of the mind towards a particular subject is attended with a feeling of desire or interest. We are not, indeed, enabled by our power in this respect either directly to call up or to banish any one or any number of our thoughts. But the consequence is, a variety of trains of thought are suggested, which would not have been suggested, had it not been for the circumstance of the original train being delayed. Thus, in the course of our mental associations, the name of Sir Isaac Newton occurs ;—we experience a strong

Interest; aided by this interest, we check
of our thoughts at that name, and we feel
—scious, that we have within us the ability
While we delay upon it, a variety of series
as occurs. At one moment, we think of eminent
ematicians and astronomers, for he himself was one ;
another, we think of those cotemporaries, who were
his particular friends, whatever their rank in science, be-
cause they lived at the same time ; a moment after, our
minds dwell upon some striking incidents in his life or
some marked features in his social or intellectual char-
acter ;—and again, we may be led to think, almost in the
same instant, of some proposition or demonstration,
which had once exercised his patience and skill. In
consequence of delaying a few moments on the name or
rather on the general idea of the man, these different
trains of thought are presented ; and we can evidently fix
our minds upon one of these subjects, if we choose, or
have a desire to, and dismiss the others. This is one way,
in which by choice or volition we are able to exercise a
considerable indirect power over our associations.

(2) We acquire, in the second place, great power over
our associations by HABIT; and, as no man ordinarily forms
such habit without choosing to form it, we have here
another instance of the indirect power of volition. By
the term Habit, when it is applied to our mental opera-
tions, we mean in particular that facility or readiness,
which they acquire by being frequently repeated. The
consequence of repetition or frequent practice is, that cer-
tain associations are soon very much strengthened, or that
a facility in them is acquired.

Striking instances of the effect of repetition have been
given in the course of this chapter, although it might per-
haps be said in respect to these, that they were forced up-
on us by our particular situation, rather than brought
about by positive desire or choice. But there are other
instances, to which this remark is not equally applicable.
—It is a well known fact, that almost any person may
become a punster or rhymist by taking the pains to form

a habit, that is, by increasing the facility of certain associations by frequent repetition. By punning we understand the power of readily summoning up, on a particular occasion, a number of words different from each other in meaning, but resembling each other, more or less, in sound.—That facility of association, which is acquired by frequent repetition and which is commonly expressed by the word HABIT, (as when we say of a person that he has formed a habit of expression,) is the great secret of fluency in extemporaneous speaking. The extemporaneous speaker must, indeed, have ideas ; no modification of association whatever can supply the place of them. But his ability to arrange them in some suitable order and to express them in words without previous care and effort, is the result, in a great measure, of habits of association flowing from his own choice and determination.— (See Stewart's Elements, VOL. I. CH. VI. PT. 2 ; Historical Dissertation, PT. I. §. II. CH. 2 ; Brown's Lectures, XLI, XLII, XLIX. &c.)

CHAPTER ELEVENTH.

COMPLEX NOTIONS OF EXTERNAL ORIGIN.

§ 230. *Of simplicity and complexity of mental states in general.*

Before leaving that portion of our knowledge, which has an external origin, it is necessary to examine it in relation to the principle or law of Simplicity and Complexity, which was formerly considered. We find on examination, that our mental states do not possess the same value, but oftentimes one is virtually equal to many others; and hence we are able to resolve the whole mass of them into the two general classes of Simple and Complex. It may seem surprising, that one mental state, which has a perfect unity and simplicity in itself, should still embrace two, three, or any number of others; but such is undoubtedly the fact. Let us fix our attention upon whatever complex notion or feeling we please to, and we shall find it susceptible of being examined under this view; we may consider it in its whole or in its parts, in its comprehension or its elements.

And it may be added here, that, in a practical point of view, the ability to do this, and the habit of doing it are of much importance. In early life, and in all the stages of education, the practice of mental analysis, in its application to particular thoughts and feelings, should undoubt-

edly be kept up. It will in the end aid much in clearness of perception, and in the training up of a prompt and accurate judgment, if no word, expressive of a complex mental state, is permitted to be used without a proper understanding of what is involved in it.—Looking therefore at those sensations and notions, which the mind has access to through the direct medium of the senses, we find them either **SIMPLE** or **COMPLEX**. There is not a single feeling, not a single idea, which is not comprehended in this arrangement, and does not belong to one of these two classes.

§. 237. *Instances of simple ideas from the senses.*

It is proper, before looking at those notions which are complex, to refer to some of those which are simple; as even the brief consideration of the latter will help to throw light on the former.—Among the simple ideas, (sensations perhaps is here the more appropriate term,) which we become possessed of by means of the senses, are all the varieties of colour, as red, white, yellow, green, &c., received by the sense of sight. Under the head of simple notions are to be included also the original intimations of the touch, as resistance, extension, hardness, and softness, &c. The character of simplicity is to be ascribed in like manner to the original sensations of sound, received by the sense of hearing; and to those of the smell and the taste.

These elementary notions are conformed to the general view, which has been given in a former chapter of our uncompounded feelings, viz, They are not capable of a separation into parts and of being resolved into other elements, and as a consequence of this, are not susceptible of being made clearer by definition. Nevertheless they are not obscure and mysterious, and can well do without any laboured exposition. They are just what nature made and designed them to be, distinct and definite, as a general statement, both in themselves, and to men's comprehension of them.

When we make this statement, with the limitation of its being true and applicable in general, we have reference to

these cases, where one sensation borders upon and runs into another, and where the human mind undoubtedly finds its apprehension of them somewhat indistinct. There are many simple sensations, answering to this description, to which we give no names; the prominent diversities only are marked in that way, to the neglect of those, which approximate, and partially mingle in with other diversities.

§. 238. *Of objects contemplated as wholes.*

But what we term our simple notions are representative only of the parts of objects. In point of fact, however, these external objects, which come under our notice, are presented to us as wholes, and as such, (whatever may have been the original process leading to that result,) we very early contemplate them.—Take for instance a **LOADSTONE**. In their ordinary and common thoughts upon it, men undoubtedly contemplate it as a whole; the state of mind, which has reference to it, embraces it as such. This complex notion, like all others which are complex, is virtually equal to a number of others of a more elementary character.

Hence, when we are called upon to give an account of the loadstone, we can return no other answer than by an enumeration of its elements. It is something, which has weight, colour, hardness, friability, power to draw iron, and whatever else we discover in it.

We use the term **GOLD**. This is a complex term, and implies a complexity in the corresponding mental state. But if we use the word gold, or any other synonymous word, in the hearing of a man who has neither seen that substance, nor had it explained to him, he will not understand what is meant to be conveyed. We must enter into an analysis; and show, that it is a combination of the qualities of yellowness, great weight, fusibility, ductility, &c. We look upward to the sun in the heavens. But what should we know of that great aggregate, if we could not contemplate it in the elements of form and extension, of brightness and heat, of roundness and regularity of motion?—All the ideas therefore, which we form of external objects considered as wholes, are complex; and all such complex notions are composed of those which are simple.

§. 239. *Something more in external objects than mere attributes or qualities.*

But it is to be anticipated, that we shall expose ourselves here to be pressed by certain inquiries. It will be said perhaps, that this makes the whole visible creation a mere congregation, (susceptible undoubtedly of being arranged into classes, but after all a mere congregation,) of attributes, qualities, or properties. What we behold yonder, it will perhaps be alleged as an illustration of the objection, is mere greenness, resistance, hardness, form, &c. but nothing more; it is not a TREE. In the firmament there is brightness, and heat, and roundness, and uniformity of notion, but that is all; we mistake when we suppose there is a reality, an actual SUN. In a word, this view of external objects brings us back to one of the fundamental doctrines of Pyrrho, that there is nothing external to us but certain uniform appearances, which are mistaken for existences and realities without being so.

In regard to this objection, we observe in the first place, it has no rightful application against the views we maintain, because we willingly admit and assert the truth of an existence, (however difficult and puzzling it may be to the mind to conceive of it,) independently of these qualities; in other words, that there is something more, in point of fact, than what is outwardly exhibited. On a careful examination of our feelings we shall probably find it impossible even to conceive of a quality without a subject, or an attribute without some object to which it belongs. The quality, therefore, and the existence, to which it belongs, the outward accessible presentation and the subjective nature or essence are not, in the view of the mind, identical.

Furthermore, the greater part of the qualities of bodies are not properly absolute, but depend for their full results on the coexistent action of a percipient mind; in other words they are what they are experienced to be, not in their own nature, but only in relation to ourselves. Now if we suppose every human being struck at once out

of existence, may we not reasonably imagine, that the earth will be essentially what it now is? Might not yonder tree still exist, perpetuating its form and productiveness, its flowers and fruit, though there should be no created mind, where its fragrance would linger, or its beauty be revealed? Might not the sun pursue his journey in the heavens, though there should be none to rejoice in his rising, or to mark his going down? Would not nature in her essence, and in all her forms, remain in fact the same, although the peculiar aspect, in which she had previously been revealed to man, would no longer be realized?—If there be a foundation for these inquiries, they evidently go to evince the reasonableness of the supposition, that a distinction may be drawn between the qualities of matter and matter itself, between the material attribute and the material subject, between the outward relative developement and the inward absolute nature.

It will then perhaps be asked, Why we do not direct our attention at once to the true subjective existence, to matter itself, and not delay upon its appendages? The answer is, we cannot; the mind has its limits. It might be asked with the same reason, Why we do not look directly into the existence and essence of the Deity, instead of studying Him in his works and intermediate manifestations? The answer is the same.—The qualities and properties of bodies are the signs or marks, which are immediately presented to our notice. They form the occasion, on which the mind, by its power of ORIGINAL SUGGESTION, assures us of something more than the signs, which immediately fall under our notice. It assures us of a real existence, bearing undoubtedly a peculiarity of aspect, in consequence of the way in which it is made known to us, but still an independent reality; and we call it variously a material subject, material existence, matter, &c. Nor is this notion to be regarded as indistinct, although being a simple one, each one must depend for the clearness of his perception of it on himself.

This view leads us back to a conclusion, which on a former occasion was expressly admitted, (§. §. 58, 60.)

After what has now been said, we still acknowledge, as in the sections referred to, our ignorance of the interior nature of matter ; we know its existence, as we do that of the mind, but we know the nature of neither of them ; except so far in both cases as it is made known by the developement of their attributes and properties. We acknowledge also our inability to make the nature of any body of matter known to others, except by a reference to such attributes and properties. But in respect to acknowledging in any form or in any way, that matter has no true and substantial existence, however limited and perplexed may be our understanding of it, we could not do it without violence to an original and authoritative intimation of our mental nature, which sophistry may indeed for a moment cloud and perplex, but which can never be permanently weakened and overthrown by any thing.

§. 240. *Complex notions preceded by simple ones.*

It would seem from what has been thus far stated, that there is in the class of mental states now under consideration an internal or mental complexity, corresponding to the complexity in the external object. But it is not to be thought, that we arrive at this ultimate complexity of mental state by a single act, by an undivided and inseparable movement of the mind, although, such is the rapidity of the process, it may in some cases seem to be so. On the contrary, every simple idea, involved in, and forming a part of the compound, so far as we have any distinct conception of the compounded idea, passes under a rapid review, and the complex state of the mind is the result of this rapid review. We cannot, for instance, have the complex notion of a man, of iron, of loadstone, of a tree, &c. without having first, at some time, subjected each simple element, of which such objects are made up, to a separate examination. (See §. §. 136, 139.)

This glance of the mind at the various simple notions is performed indeed with such extreme quickness, (at least generally so,) that the successive steps of it are not recol-

lected ; but this, when we consider the rapidity of the mind's operations in other instances, is no sufficient objection to the statement, which has been made.

The process in the formation of complex ideas goes on from step to step, from one simple or elementary part to another, but when the examination is completed, the ultimate state of the mind, which the completion of the process implies, is not to be considered as in any degree wanting in unity or oneness. It is, in itself considered, as much one and indivisible as any of those states of mind which we know to be simple.

§. 341. *Imperfections of our complex notions of external objects.*

Although the mind of man is to be regarded, in the great ordering and constitution of things, as in some important sense the representative of the material universe, it must still be acknowledged to be a very imperfect one. It is as true in nature, as it is in religion, that we know only in part. Men have no doubt been always advancing in knowledge, but when we compare our present acquisitions with our former ignorance, we may well anticipate, that the progress of the future will lay the foundation of another comparison, not so flattering to the present generation. This view will not only apply to knowledge in the mass ; but will hold good, on a smaller scale, of every complex notion which we form.—Take for instance the complex idea of Gold. The thought is understood to be the representative of the thing. But is it in this case a true one ? If we should admit it to be so as far as it goes, still it is evidently not a full or perfect one ; nor can we regard it as such without suffering ourselves to be led into error. In the complicated notion, to which men agree in giving that name, we combine the simple ideas of yellowness, weight, hardness, malleability, and perhaps others ; but it is only reasonable to suppose, that no person combines, in his conception of it, all its properties.

Philosophy may boast of her achievements ; but nature has not revealed all her secrets yet. Can any man

explain the mode of the connection between mind and matter ? That is a secret not yet cleared up. Can any man assert positively what that cohesion or attraction is, which holds together the parts of gold, iron, and other material bodies ? That is a subject also, on which nature has reserved to herself something further to say. One body impinging upon another puts it in motion ; and in our wisdom we give it a name ; we call it motion by impulse. But can any man tell, what motion is ? Still more can he point out, how motion passes from one body to another when the particles of those bodies come in contact, if indeed there can be any actual contact ?—Such are the doubts, that press upon us, wherever we turn our eyes. But this is not said to discourage inquiry. The first step in laying a good and broad foundation is to be fully sensible of our ignorance, and of the mind's limits.

§. 242. *Importance of correcting and enlarging our complex notions.*

While we insist here as formerly, that the mind has its limits which it cannot pass, we object with equal earnestness to any perversion or misapplication of this fundamental doctrine. Rightly understood, it is a great help. But it is not rightly understood, if we suppose that the doctrine of the mental powers being limited necessarily implies, that the mind is stationary. Although limited in some respects, it is not kept every where in check ; essentially active and progressive, it is capable of great and happy triumphs. The history of almost every department of science clearly evinces the truth of this last remark.

In the days of Moses men looked upon the earth as a plane surface, and upon the heavenly firmament as a solid concave sphere, which might be opened and shut by means of windows and gates, as occasion required. But modern astronomy, if one may be allowed the expression, has made a window of the whole, removed the gates, and let in an unbounded universe.

We have the authority of Condorcet for the assertion, that the geometry of ancient Egypt and India consisted

only of certain elementary truths ; and even these were not known to the people generally, but only to the priests. But such was the advancement of the human mind, that some years afterwards, in the time of Hipparchus and Archimedes, these truths had not only been enlarged into sciences, but were taught in their new and extended forms in the Grecian Schools, and had become the property of the great body of the people. Modern times have advanced still farther ; they have simplified while they have discovered ; so that abstruse geometrical relations, which were once a task for the strongest intellect, have now become parts of elementary instruction.*—There has been a corresponding improvement in other departments, and especially in the science of man, in morals and politics, in the rights and duties of citizens and nations.

The human mind, therefore, is to be regarded as certainly and essentially progressive, although it is acknowledged to be in some respects limited. It tarries not by the

* The passage of Condorcet, referred to in the text, and which may be found near the close of his treatise on Public Instruction, is as follows ;—" Ces vérités élémentaires de géométrie et d'astronomie, qui avoient été dans l'Inde et dans l'Egypte une doctrine occulte, sur laquelle des prêtres ambitieux avoient fondé leur empire, étoient dans la Grece, au temps d'Archimede ou d'Hipparque, des connoissances vulgaires enseignées dans les écoles communes. Dans le siecle dernier, il suffisoit de quelques années d'étude pour savoir tout ce qu'Archimede et Hipparque avoient pu connoître ; et aujourd'hui deux années de l'enseignement d'un professeur vont au-delà de ce que savoient Leibnitz ou Newton. Qu'on médite cet exemple, qu'on saisisse cette chaîne qui s'étend d'un prêtre de Memphis à Euler, et remplit la distance immense qui les sépare ; qu'on observe à chaque époque le génie devançant le siecle présent, et la médiocrité atteignant à ce qu'il avoit découvert dans celui qui précédoit, on apprendra que la nature nous a donné les moyens d'épargner le temps et de ménager l'attention, et qu'il n'existe aucune raison de croire que ces moyens puissent avoir un terme." *Bibliothèque de L'Homme Public, Sur L'Instruction Publique par M. Condorcet, 3d Memoire.*

way. While in some directions it is checked by impassible boundaries, and controlled by unalterable laws, it marches ardently forward in others, gathering strength from its increased concentration, and securing the victory by the unity and directness of its attack.

Now these general views in regard to the mind, we would apply to the elements of knowledge ; (we speak here exclusively of the knowledge of the external world.) The mass of knowledge takes its character from that of its elements. If the latter be erroneous, it is like the canker in the bud, and like the little leaven that leavens the whole lump ; it will soon affect the entire mass ; it will mar the strength and beauty of the whole system. As a general statement, there is no mistake in our simple notions, as far as they go ; they are just what nature made them, and designed them to be ; but those, which are complex, are susceptible both of enlargement and correction. It is a great object therefore to give them an enhanced value, both by multiplying their elementary parts, and by expelling from them those, which have been prematurely and wrongly introduced. It is in this way revolutions are effected in the human mind. A man examines his complex notion of an external body ; of an earth, a mineral, a vegetable, or an animal. He finds reason to reject one elementary view, which he had formerly entertained, and to substitute another. And in doing so it is not improbable, that he has laid the foundation for a change in the features of a whole science.

§. 243. *Of what are to be understood by chimerical ideas.*

Mr. Locke somewhere speaks of certain notions, which the mind is capable of framing and to which it ascribes an external and material existence, as CHIMERICAL, in opposition to those which are real. Although the consideration of the notions thus designated may be deemed more important in a practical, than a purely philosophical point of view, the subject is evidently deserving some attention.

When an idea is a real or well-founded one, it has something precisely corresponding to it in nature, at least so

far as it is understood to be representative of any thing. But when the mind so brings together and combines its perceptions as to form something of which nature presents no corresponding reality, then such notion or feeling is spoken of as chimerical. If, for instance, a person were known to have an idea of a body, yellow, or of some other colour, malleable, fixed, possessing in a word all the qualities of iron or of gold with this difference only, of its being lighter than water, it would be what we term a chimerical idea. That is; it would have nothing corresponding to it in the nature of things.

We read, among other marvels of the Scandinavian mythology, of *Nagelfara*, the ship of the gods.* It had the singular property of almost indefinite enlargement or diminution according to circumstances. When the hour of sailing came, the favouring gales blew of themselves, and the vessel displayed room enough for the reception of the uncounted deities, to which the creative imaginations of the North had given existence. When the voyage was over, it shrunk into the most dwarfish dimensions, so that it could be taken apart, folded up, and carried conveniently in the pilot's pocket.—Although all the elements, of which this curious fiction is framed, are to be found in nature, it would still be termed, in the phraseology of Mr. Locke, CHIMERICAL, because the combination of them does not thus exist; it has no outward or objective reality. And a similar remark will apply to a multitude of other instances, which are to be found every where in the religious mythology, and the early traditions of nations. There is the CENTAUR, a fabulous animal, partly man and partly horse; the DRAGON, an immense serpent, furnished with wings, and capable of making its way through the atmosphere by their aid; the HYPOGRIFF, an imaginary steed, having the power also of performing aerial journeys; saying nothing of magical swords, enchanted castles and islands, &c.

Such chimeras, framed in the days of ignorance, have been too numerous; and not unfrequently the belief in

* The *ÆDDA* or Ancient Icelandic and Runic Mythology, *FAB.* XXII.

them has been fostered and transmitted in the inner eye of the human understanding. Happily for us, on whom, in the language of Scripture, the ends of the world have come, in the abundance and operation of real causes, we are not obliged to resort to imaginary ones. There are grand agencies at work in nature, of which the mind of man in its childhood never conceived. There are not only causes enough, but their agency is sufficiently striking to gratify all our wonder, without violating the strictness of truth, or overstepping the bounds of reality.

§. 244. *Of the introduction of such notions in early life.*

The views of the last section are of some practical consequence in training up the young mind. If causes exist in the soul itself, which, under an erroneous direction, will result in false or chimerical notions, we may find here a practical rule in Education. The mind in early life should be carefully trained up to the knowledge of things as they are; and not to an acquaintance with mere suppositions, or with things as they are not. While the young mind by the mere aid of that instrumentality, which the author of nature has furnished, is constantly storing up important thoughts, it also receives false ideas from various sources. These erroneous intimations are not necessarily to be attributed to the imperfection of the sense, or to any thing originally in the constitution. There is no lack of sources of error, without casting such impressions on the original tendencies of the mind. While nature at a very early period is rapidly carrying on the process of mental development and instruction, too frequently her suggestions, instead of being aided, are counteracted or misrepresented by parents or domestics.

In support of this remark, it is merely requisite to refer to the numerous false notions, which children are led to entertain in respect to the existence of ghosts and other imaginary beings. It cannot be pretended, that such notions are the result of the mental powers in their legitimate exercise; on the contrary they are engrafted upon

often by an extraneous and evil agency, which thus, either thoughtlessly or maliciously, perverts the commendable fears, and hopes, and devotional impulses of the soul. It is true undoubtedly, that many systems of superstition, many mythological codes of the most venerable antiquity, and with them their thousand chimeras, have passed away. But all is not yet gone ; spectres, and aerial visitants, and enchantments still haunt the nursery. But there is certainly no want of true and important notions, which can be made an excuse for the introduction of such absurd and unfounded ones ; and it ought to be made a great object to keep the mind as free from them as possible.

The greater heed is to be given to this direction, because permanently evil consequences are found to result from the neglect of it. We have the experience and testimony of many judicious persons, that the introduction of ideas of ghosts, &c. in early life ever afterwards renders one incapable of enduring darkness or solitude without great disquietude.

CHAPTER TWELFTH.

ABSTRACTION.

§. 245. *Abstraction implied in the analysis of our complex notions.*

THE remarks, which have been made, in the course of the foregoing chapter, on the analysis and examination of our Complex Intellectual states, naturally lead to the consideration of another subject in some respects intimately connected with that topic. When we have once formed a complex notion, (no matter at what period, in what way, or of what kind,) it often happens that we wish, for reasons already given, to examine more particularly some of its parts. Very frequently this is absolutely necessary to the full understanding of it. Although undoubtedly its elementary parts once came under review, that time is now long past ; it has become important to institute a new inspection, to take each simple notion involved in it, and examine it by itself. And this is done by means of the process of ABSTRACTION, and in no other way.

By the aid of that process, our complex notions, however comprehensive they may be, are susceptible, if one may be allowed so to speak, of being taken to pieces, and the elementary parts may be abstracted or separated from each other ; that is, they are made subjects of consideration apart from other ideas, with which they are ordinarily found to be associated. And hence, whenever this is

the case in respect to the states of the mind, they are sometimes called **ABSTRACTIONS**, and still more frequently are known by the name of **ABSTRACT IDEAS**.

For the purpose of distinctness in what we have to say, they may be divided into the two classes of Particular and General ; that is to say, in some cases the abstraction relates only to a single idea or element, in others it includes more. — **General Abstract Ideas**, (or the notions which we form of Genera and Species,) will form a distinct subject of consideration.

§. 246. *Instances of particular abstract ideas.*

We shall proceed therefore, to remark here on Particular abstractions. Of this class the notions, which we form of the different kinds of colours, may be regarded as instances. For example we hold in our hand a rose ; it has extension, colour, form, fragrance. The mind is so deeply occupied with the colour, as almost wholly to neglect the other qualities. This is a species of abstraction, although perhaps an imperfect one, because when an object is before us, it is difficult, in our most attentive consideration of any particular quality or property, to withdraw the mind wholly from the others. When, on the contrary, any *abstract* object of perception occurs to us, when we think of or form a conception of it, our thoughts will readily fix upon the colour of such object, and make that the subject of consideration, without particularly regarding its other qualities, such as weight, hardness, taste, form, &c. We may also distinguish in any body, (either when present or still more perfectly when absent,) its solidity from its extension, or we may direct our attention to its weight, or its length, or breadth, or thickness, and make any one of these a distinct object in our thoughts.

And hence, as it is a well known fact, that the properties of any body may be separated in the view and examination of the mind, however closely they may be connected in their appropriate subjects, we may lay down this statement in respect to the states of mind before us ; viz. When any quality or attribute of an object, which does

not exist by itself, but in a state of combination, is detached by our minds from its customary associates, and is considered separately, the notion we form of it becomes a particular abstract idea.—The distinctive mark of this class is, that the abstraction is limited to one quality. It should perhaps be particularly added, that the abstraction or separation may exist mentally, when it cannot take place in the object itself. For instance, the size, the figure, length, breadth, colour, &c. of a building may each of them be made subjects of separate mental consideration, although there can be no real or actual separation of these things in the building itself. If there be any one of these properties, there must necessarily be all.

§. 247. *Mental process in separating or abstracting them.*

The manner of expressing ourselves on the subject of our abstract notions, to which we have been accustomed, is apt to create and cherish a belief in the existence of a separate mental faculty, adapted solely to this particular purpose. But the doctrine of a power or faculty of abstraction, which is exclusive of other mental susceptibilities, and is employed solely for this purpose, does not appear to be well founded. It will convey an impression nearer the truth to speak of the process, rather than the power of abstraction.—The following statement will be sufficient to show, how those of the first class, or particular abstract ideas are formed.

Although our earliest notions, whether they arise from the senses or are of an internal origin, are simple, existing in an independent and separate state, yet those simple thoughts are very soon found to unite together with a considerable degree of permanency, and out of them are formed complex states of mind. Many are in this way combined together in one, and the question is, how this combination is to be loosened, and the elementary parts are to be extracted from their present complexity?

In answer it may be said, that, in every case of separating a particular abstract idea, there must necessarily be a co-existent feeling of interest, choice, or desire. With-

out such feeling it is evident there can be no abstraction. This feeling must concern the previous complex state of the mind when viewed in one respect, rather than another ; or what is the same thing, it will concern one part of the complex idea rather than another. So that we may truly and justly be said to have a desire to consider or examine some part of the complex idea more particularly than the others. When the mind is in this high degree directed to any particular part of a complex notion we find it to be the fact, that the principle of association, or whatever unknown principle it is, which keeps the other parts in their state of virtual union with it, ceases in a corresponding degree to operate and to maintain that union ; the other parts rapidly fall off and disappear, and the particular quality, towards which the mind was especially directed, remains the sole subject of consideration. That is to say, it is abstracted or becomes an abstract idea.—If for example we have in mind the complex notion of any object, a house, tree, plant, flower, and the like, but have a desire or interest in reference to the colour, mingling in with this complex notion, the consequence is, that the quality of colour will soon occupy our whole regard, and the other qualities will disappear, and no more be thought of. If we desire to examine the weight or extension of an object, the result will be the same ; in other words, the extension, weight, colour, &c. will be abstracted.

This, in the formation of particular abstract ideas, seems to be the process of the mind, and nothing more ; viz. The co-existence of a feeling of desire or choice in respect to some particular part of any complex notion, and the consequent detention of the part, towards which an interest is felt, and the disappearance of the other parts.—Such is the activity of the mind, and in so many ways it views the “images of things,” that this striking process of detaching, and examining, and changing the parts of our complex notions, is almost constantly going on. And after the mind has thus shifted its position, and has been now in this state, and now in that, as if playfully to show its wonderful readiness in diminishing itself to a

part of its previous complexity, it seems as readily to swell back again, if we may be allowed in such figurative expressions, to its former dimensions, and often exists the same as before the process of abstraction commenced.

§. 248. *Of generalizations of particular abstract ideas.*

The terms GENERALIZING and GENERALIZATION are often found applied to the states of mind under consideration. When we have made any quality of a body a distinct and separate subject of attention, we may further regard it as belonging to one or more objects, according as we find such to be the fact, or otherwise. What is chiefly meant therefore, when we speak of the generalizing of this class of abstract notions, is that, in our experience of things, we observe them to be common to many subjects. We find whiteness to be a quality of snow, of chalk, of milk, and of other bodies; and whenever with the simple abstract notion of whiteness we connect in our thoughts the additional circumstance of its not being limited to one body but the property of many, the term may be said to be generalized. And this seems to be all, that can be properly understood by generalization, when applied to the states of mind now before us.

§. 249. *Of the importance and uses of abstraction.*

The power of Abstraction, as it has sometimes been called, is by no means an unimportant one, even when limited to the separation of the particular or simple elements of thought.—“A carpenter, (says Kames,* speaking of the great utility of abstraction,) considers a log of wood with regard to hardness, firmness, colour, and texture; a philosopher, neglecting these properties, makes the log undergo a chemical analysis, and examines its taste, its smell, and component principles; the geometri-
cian confines his reasoning to the figure, the length, breadth, and thickness; in general, every artist, abstracting from all other properties, confines his observations to those,

* Elements of Criticism, Vol. III. Appendix.

which have a more immediate connection with his profession."

Besides its well-known uses in the various forms of reasoning, (particularly demonstrative reasoning,) abstraction is greatly subservient to the exertions of a creative imagination, as they appear in painting, architecture, poetry, and the other fine or liberal arts.

The poet and the painter are supplied with their materials from experience; without having received ideas from some source, they never could have practised their art. But if they do not restrict themselves to mere imitation, they must combine and modify the ideas which they have, so as to be able to form new creations of their own. But every such exertion of their powers presupposes the exercise of abstraction in decomposing and separating actual conceptions, and in forming them anew.

From how many delightful forms in nature, and how many ideal temples contemplated for a long time in the mind's eye, must the genius, that planned the famous Parthenon, have abstracted every form of beauty, and excellence of proportion! From how many forests of harmony both seen and imagined, and fields of bloom, and rivers and waterfalls, must the mind, that conceived the Garden of Paradise Lost, have drawn each sound, that is enchanting to the ear, and colour, that is pleasant to the sight!

CHAPTER THIRTEENTH.

GENERAL ABSTRACT IDEAS.

§. 250. *General abstract notions the same with genera and species.*

WE proceed, in connection with the remarks of the last chapter, to the consideration of **GENERAL ABSTRACT** ideas; a subject of no little interest, and which has frequently been thought to be attended with no small difficulty.

General Abstract notions are not only different, in consequence of embracing a greater number of elementary parts, from those which are particular, but are also susceptible of being distinguished from the great body of our other complex notions.—The idea for example, which we form of any individual, of John, Peter, or James, is evidently a complex one, but it is not necessarily a general one. The notion, which we frame of a particular horse, or of a particular tree is likewise a complex idea, but not a general one. There will be found to be a clear distinction between them, although it may not be perfectly obvious at first. **GENERAL ABSTRACT IDEAS** are our notions of the classes of objects, that is, of Genera and Species. They are expressed by general names, without, in most cases, any defining or limitation, as when we use the words **ANIMAL, MAN, HORSE, BIRD, SHEEP, FISH, TREE**, not to express any one in particular of these various classes, but animals, men, horses, &c. in general.

§. 251. *Process in classification or the forming of genera and species.*

Now if our general abstract ideas, so far as they relate to external objects, are truly notions of SPECIES and GENERA, it will aid us in the better understanding of them, if we briefly consider, how species and genera are formed. Men certainly find no great practical difficulty in making these classifications, for we find that they are made in numberless instances, and at a very early period of life. They are evidently governed in the process by definite and uniform mental tendencies; and though they sometimes make mistakes, such mistakes are neither frequent nor permanent, and besides are generally owing to partial and incidental causes.

What then is the process in classification?—It is obvious, in the first place, that no classification can be made without considering two or more objects together. A number of objects, therefore, are first presented to us for our observation and inquiry, which are to be examined first in themselves, and then in comparison with each other. We will take a familiar scene to illustrate what takes place.

We suppose ourselves to stand on the bank of a navigable river; we behold the flowing of its waters, the cliffs that overhang it, the trees that line its shore, the boats and boatmen on its bosom, the flocks and herds, that press down to drink from its waves. With such a scene before us, it is to be expected, that the mind will rapidly make each, and all of these the subjects of its contemplation; nor does it pursue this contemplation and inquiry far, without perceiving certain relations of agreement or difference. Certain objects before it are felt to be essentially alike, and others to be essentially different; and hence they are not all arranged in one class, but a discrimination is made, and different classes are formed. The flocks and herds are formed into their respective classes. The tall and leafy bodies on the river's bank, although they differ from each other in some respects, are yet found to agree

in so many others, that they are arranged together in another class, and called by the general name of **TREE**. The living, moving, and reasoning beings, that propel the boats on its waters, form another class, and are called **MAN**.

And there is the same process, and the same result in respect to all other bodies coming within the range of our observation.

§. 252. *Early classifications sometimes incorrect.*

It has been stated, that, in making these classifications, men are governed by definite and uniform mental tendencies; still, it must be acknowledged, that mistakes are sometimes committed, especially in the early periods of society, and in all cases where the opportunities of examination and comparison are imperfect. When man first opens his eye on nature, (and in the infancy of our race, he finds himself a novice, wherever he goes,) objects so numerous, so various in kind, so novel and interesting, crowd upon his attention; that, attempting to direct himself to all at the same time, he loses sight of their specific differences, and blends them together, more than a calm and accurate examination would justify. And hence it is not to be wondered at, that our earliest classifications, the primitive genera and species, are sometimes incorrectly made.

Subsequently, when knowledge has been in some measure amassed, and reasoning and observation have been brought to a greater maturity, these errors are attended to; individuals are rejected from species, where they do not properly belong, and species from genera. The most savage and ignorant tribes will in due season correct their mistakes, and be led into the truth.

§. 253. *Illustration of our first classifications from the Savages of Watecoo.*

We are naturally led to introduce an incident here, which throws some light on this part of our subject. The English navigator Cook, in going from New Zealand to the Friendly Islands, lighted on an Island, called Watecoo.——“The inhabitants (he says) were afraid to

come near our cows and horses; nor did they form the least conception of their nature. But the sheep and goats did not surpass the limits of their ideas, for they gave us to understand, they knew them to be *birds*."

Captain Cook informs us, that these people were acquainted with only three sorts of animals, viz. dogs, hogs, and birds.—Having never before seen any such animals as a cow or a horse, they beheld their great size and formidable aspect with admiration; filled with fear, they could not be induced to approach, and knew not what to call or think of them. They noticed the goats and the sheep, and clearly saw, that they were different from the dogs and hogs, with which they had been acquainted. But how did it happen, that they called them birds?

There is no nation so rude and uncivilized, as not to have formed a few classifications, and not to possess a few general terms. Having noticed a variety of birds in their waters and forests, the people of Wateoo had undoubtedly found it necessary before this period to assign some general name or appellative to the flying animal, expressive of those resemblances, which evidently pervade the whole class. They called them, we will suppose, *BIRDS*. Knowing there was a great variety of them, and that they were of different sizes, they not unnaturally applied the same term to the sheep and goats of the English. They knew not but there might be some new class of birds, which they had not hitherto noticed; and they saw no insuperable objection, in the size of the sheep and goats, to this disposition of them, whatever other objection they might subsequently have found.

But they could clearly have no thoughts of this kind in respect to cows and horses; and as to hogs and dogs they had no generic term for them, having never known more than one variety or class, and having never been led to suspect, that there was, or could be any other.

§. 254. *Of the nature of general abstract ideas.*

The notions, which are thus formed in all cases of classification, are commonly known, in the Treatises hav-

ing relation to these subjects, as General Abstract ideas. And they are no less numerous than the multiplied varieties of objects, which are found to exist every where around us. It is thus, that we form the general notions of animal and of all the subordinate species of animals ; of tree and its numerous varieties ; of earths, and minerals, and whatever else is capable of being arranged into classes.

We may apply these views not only to natural objects, but to forms and relations of a very different character. The word Triangle is the name of a general abstract idea. Great exceptions however have been taken to certain incautious expressions of Mr. Locke on this point. He asserts, that it requires some pains and skill to form the general idea of a triangle, and gives the following reason ; “ for it must be neither oblique, nor rectangle, neither equilateral, equicrural, nor scalenon, but all and none of these at once,” &c. This language is undoubtedly open to criticism, and in truth has not failed to receive a full share. The correct view seems to be this. The word TRIANGLE is not only the name of a class, but of a very general class ; it is the name of a Genus, embracing all those figures, which agree in the circumstance of being bounded by three strait lines meeting one another so as to form three angles. A figure having any other form, (in other words not exhibiting a resemblance or similarity in this respect,) is excluded from the Genus ; but it is still so extensive, taken in the sense just now mentioned, as to include all figures whatever of that name.—Now there are embraced within the genus, as in numerous other cases, subordinate classes, which are distinguished by their appropriate names, viz, the class of acute-angled triangles, that of right-angled triangles, of obtuse-angled triangles, &c.

But it is to be noticed, that the general idea, whatever objects it may be founded upon, does not embrace every particular, which makes a part of such objects. When we look at a number of men, we find them all differing in some respects, in height, size, colour, tone of the voice, and in other particulars. The mind fixes only up-

on these traits' or properties, with which it can combine the notion of resemblance; that is to say, those traits, qualities, or properties, in which the individuals are perceived to be like, or to resemble each other.—The complex mental state, which embraces these qualities and properties, and nothing more, (with the exception of the superadded notion of other bodies having resembling qualities,) is a General Abstract idea.

And hence the name. Such notions are called **ABSTRACT**, because, while embracing many individuals in certain respects, they detach and leave out altogether a variety of particulars, in which those individuals disagree. If there were not this discrimination and leaving out of certain parts, we never could consider these notions, regarded as wholes, as otherwise than individual or particular.—They are called **GENERAL**, because, in consequence of the discrimination and selection which has just been mentioned, they embrace such qualities and properties as exist not in one merely, but in many.

The difference, therefore, between the complex notion, which we form of any particular object, and the general complex feeling now under consideration is truly this; the latter combines together fewer particulars, but unites with such, as it does combine together, the additional notion of resemblance, which implies as its basis the comparison of a number of objects, and is perhaps the distinguishing circumstance.—Hence it must be allowed, that there is no outward object precisely corresponding to the **GENERAL NOTION**, which we form. The mind takes into view only a division or part of any one object, combining with this select view, the notion of other objects, and the relation of resemblance, in respect to such division or part.

If it should be asked, By virtue of what principle is this discovery of a resembling relation made? The answer is, (and it is the only one, which can be given,) that there is in the mind an original tendency or susceptibility, by means of which, whenever we perceive different objects together, we are instantly, without the intervention of any

other mental process, sensible of their relation in certain respects.

§. 255. *Objection sometimes made to the existence of general notions.*

It should not, however, be objected, as is sometimes done, that we can have no such general notion at all, because there is nothing outward, which it precisely corresponds to. Such an objection, although it appears to have been frequently made, goes too far; it would seem even to lead to the conclusion, that we can have no complex idea of any kind, neither particular nor general. It cannot be pretended, that even our notions of particular objects correspond precisely to those objects; the ideas, which we form of a particular house, tree, or plant, or any other individual object, are often erroneous in some respects, and probably always imperfect. But they are not, for that reason, to be regarded as false and chimerical, and to be rejected as having no foundation in nature.

We will suppose ourselves to have been acquainted in former years with a particular elm; we have looked upon it a thousand times; and it is familiar to us as any of our most cherished remembrances. At this great distance of time and place we form an idea, a conception, a notion of it, but it cannot be presumed to be a perfect or complete one. It cannot be pretended, that we have a notion not only of the trunk, but of every leaf and of the form of every leaf, of every branch and its intertwinings with every other branch; that it exists in our minds precisely, and in every respect, the same as it exists on the spot, where it grows. If therefore general abstract ideas are to be rejected, because they embrace only parts of those objects, which are ranked under them, we must on the same grounds reject and deny also our complex notions of individual objects; but this probably no one is prepared to do.

Take another obvious illustration in reproof of the objection, that, because general abstract ideas are purely mental, and have no outward and corresponding reality, they therefore do not exist.—We have an idea of God. We

presume to say, that it will be readily admitted, that we have such a notion ; not many men are without it, even among the most degraded Savages. But evidently the same objection might be raised against the existence of any such idea, as has been raised against the existence of general abstractions. If general abstract ideas are not outwardly represented, so that of the Supreme Being, which is particular though complex, is also not outwardly represented ; it is impossible, that it should be so. There is nothing we behold in heaven, or on earth, or under the earth, that is like Him. If every object in the universe were transformed into so many letters of light, to set forth his attributes and glory, they could not do it. Still we have the idea of God ; and it has as real an existence as the mind has itself.

§. 256. *Of the power of general abstraction in connection with numbers, &c.*

The ability, which the mind possesses of forming general abstract ideas, is of much practical importance ; but whether it be the characteristical attribute of a rational nature or not, as some have supposed, it is not necessary now to inquire. It is not easy to estimate the increase of power, which is thus given to the action of the human mind, particularly in reasoning. By means of general abstract propositions, we are able to state volumes in a few sentences ; that is to say, the truths, stated and illustrated in a few general propositions, would fill volumes in their particular applications. But it is enough here to refer to a single circumstance in illustration of the uses of this power.

Without the ability of forming general notions, we should not be able to number, even in the smallest degree. Before we can consider objects as forming a multitude, or are able to number them, it seems necessary to be able to apply to them a common name. This we cannot do, until we have reduced them to a genus ; and the formation of a genus implies the power, (or process rather,) of abstraction. Consequently, we should be unable without such power to number.—How great then is the practical importance

of that intellectual process in which general notions are formed!—Without the ability to reason we should be at a loss in all investigations where this ability is required; without the power to connect all our observations must be limited to particulars and we should be deprived of no general reasoning.

§. 257. Of general notions and principles.

There are not only general notions and principles but also truths or principles and of a general nature which are deserving of some special consideration as a particular mode of view. Although enough has been said already to show the importance of this notion, it may yet be desirable to have a more full view of its application.

The process in forming general notions or principles of an abstract nature seems to be this. We begin again undoubtedly with the examination and study of particulars with individual objects and characters and with individual events. We subsequently confirm the truth of whatever has been ascertained in such manner by an observation of other like bodies and events. We proceed then from the individual to another, till we attain to a general notion.

Having in this way arrived at some general notion or principle, we then observe that the same is the characteristic of the particular objects in which it is contained and make it alone, exclusively and universally the subject of our mental contemplation. We repeat this process again and again, till the mind is filled with many such notions of a multitude of particulars. It is then with notions of a general kind. These truths & notions are confirmed by a course of reasoning, compares together and contrasts them with others of still wider application. But the number of such general truths is the greater, because in reasoning alone we are not restricted to the very particular objects as in respect to the individuals coming under examination we may often safely avoid observation of each of them.

§. 258. Of the application of principles and truths.

What has been said hitherto is so general that there is a

characteristical difference between the speculations of men of philosophic minds and those of the common mass of people, which is worthy of some notice. The difference between the two is not so much, that philosophers are accustomed to carry on processes of reasoning to a greater extent, as this, that they are more in the habit of employing general abstract ideas and general terms, and that, consequently, the conclusions which they form are more comprehensive. Nor are their general reasonings, although the conclusions at which they arrive seem in their particular applications to indicate wonderful fertility of invention, so difficult in the performance as is apt to be supposed. They have so often and so long looked at general ideas and general propositions, have been so accustomed, as one may say, to contemplate the general nature of things, divested of all superfluous and all specific circumstances, that they have formed a *habit* ; and the operation is performed without difficulty. It requires in such persons no greater intellectual effort, than would be necessary in skilfully managing the details of ordinary business.

The speculations of the great bulk of mankind differ from those of philosophers in being, both in the subjects of them and in their results, particular. They discover an inability to enlarge their view to universal propositions, which embrace a great number of individuals. They may possess the power of mere argument, of comparing propositions together which concern particulars, and deducing inferences from them to a great degree ; but when they attempt to contemplate general propositions, their minds are perplexed, and the conclusions, which are drawn from them, appear obscure, however clearly the previous process of reasoning may have been expressed. And this restrict-edness and particularity of intellectual action may be even superinduced on minds, that were originally not wanting in breadth of survey, or had at least the advantages of education. It was to such an instance Mr. Burke seems to have had reference in a passage of his well-known speech on American Taxation.—Speaking of the business of office, and the limited and fixed methods and forms estab-

lished there, he remarks as follows. "Much knowledge is to be had, undoubtedly, in that line; and there is no knowledge, which is not valuable. But it may be truly said, that men, too much conversant in office, are rarely minds of remarkable enlargement. Their habits of office are apt to give them a turn to think the substance of business not to be much more important than the forms, in which it is conducted. These forms are adapted to ordinary occasions; and, therefore, persons, who are nurtured in office, do admirably well, as long as things go on in their common order; but when the high roads are broken up and the waters out, when a new and troubled scene is opened and the file affords no precedent, then it is, that a greater knowledge of mankind, and a far more extensive comprehension of things is requisite, than ever office gave, or than office can ever give."

§. 259. *Of different opinions formerly prevailing.*

The subject of general abstract ideas, of which we have given a summary view, excited very considerable interest during the Scholastic ages; and different opinions have prevailed concerning them, not only at that period, but more or less down to the present time. It is perhaps not necessary in most cases, and for most persons to plunge deeply into the history of philosophical opinions. A knowledge of the truth, when it is once found, is in general of far greater consequence, than an acquaintance with the prolonged and conflicting discussions, which led to it. The disputes, however, on the topic of general abstractions so widely prevailed, and excited so much interest and effort, that it seems to be necessary to give a short sketch of them.

In this discussion there have been three parties, viz. the Realists, the Nominalists, and the Conceptualists.

§. 260. *Of the opinions of the Realists.*

Those, who go under this name, held, that general abstract ideas have a real and permanent existence, independently of the mind. Of a man, of a rose, of a circle, and of

every species of things, they maintained, that there is one original form or archetype, which existed from eternity, before any individuals of the species were created. Its residence they seem to have assigned somewhere in the Eternal Mind itself, with this restriction, that its own existence is otherwise independent, and that it has its appropriate being, nature, and efficiency. Inherently endued with life and activity, it seeks to reveal itself in the visible and tangible figures of creation. Accordingly this original model or archetype becomes the pattern, according to which the individuals of all species are in the most important respects fashioned. The archetype, which is understood to embrace only the outlines or generic features of things, becomes an object of perception to the human intellect, whenever by due abstraction we discern it to be one and the same in all the individuals of the species.

Such was the doctrine of the Realists, which in its most essential respects was very widely received from the time of Plato and Aristotle down to the commencement of the 12th century. But since that period, excepting a few ineffectual attempts, which have been made from time to time to revive it, it has fallen into as general disrepute, on the ground of its being too hypothetical, and not sufficiently sustained by facts.

§. 261. *Of the opinions of the Nominalists.*

About the commencement of the 12th century, Roscelinus, the instructor of Abelard, whose name occupies so conspicuous a place in the history of Scholastic learning, proposed a new hypothesis. He maintained, not only that there are no original forms or archetypes, such as had been asserted to exist by the Realists, but that there are no universal abstract ideas of any kind. On the contrary, it seems to have been his opinion, as well as the sentiment of those, who have subsequently approved of this doctrine, that nothing can be called general or universal but names, and that even to them universality can be ascribed only virtually, and not in the strict and literal sense of the term.—That is, the names are in the first instance given

to individuals, but when any individuals are specified, the nature of the mind is such, that we naturally and immediately think of other individuals of the same kind. So that the names are in fact particular, although owing to the principle, which we now term association, the practical effect is the same as if it were otherwise, and hence the epithets "general" and "universal" are applied to them. This opinion in respect to general ideas and names, or some doctrine essentially of this description, has found many advocates from the days of Roscelinus and Abelard to those of Berkeley and Hume.

§. 262. *Of the opinions of the Conceptualists.*

Those, who hold to the actual existence of general abstract ideas, which are not permanent archetypes independent of the mind, but only states of the mind, have generally been called Conceptualists. We have already given what we suppose to be the true mental process in the formation of such ideas. Whether we can have such ideas is best decided by each one's personal experience; and when the examination of his internal experience is conducted with care, it can hardly be doubted, in what way such a question will be generally answered.

As far as the Realists are concerned, the mere statement of their doctrine is sufficient at the present day to ensure its immediate rejection. The question lies then between the Nominalists, and those who have commonly been called Conceptualists; and if there be insuperable objections to the doctrine of the former, that of the latter enhances its claims on our adoption.

Some of the objections to the sentiment of Roscelinus and those who have thought with him are forcibly summed up in the following passage from Brown's *Philosophy of the Mind*. (Lect. XLVI, XLVII.)

"Of that rigid Nominalism, which involves truly no mixture of Conceptualism or of the belief of those feelings of relation for which I have contended, but denies altogether the existence of that peculiar class of feelings, or states of mind which have been denominated general notions, or

general ideas, asserting the existence only of individual objects perceived, and of general terms that comprehend these, without any peculiar mental state denoted by the general term, distinct from those separate sensations or perceptions which the particular objects, comprehended under the term, might individually excite,—it seems to me that the very statement of the opinion itself is almost a sufficient confutation, since the very invention of the general term, and the extension of it to certain objects only, not to all objects, implies some reason for this limitation,—some feeling of general agreement of the objects included in the class, to distinguish them from the objects not included in it, which is itself that very general notion professedly denied.* As long as some general notion of circumstances of resemblance is admitted, I see very clearly how a general term may be most accurately limited ; but if this general notion be denied, I confess that I cannot discover any principle of limitation whatever. Why have certain objects been classed together, and not certain other objects, when all have been alike perceived by us ; and all, therefore, if there be nothing more than mere perception in the process, are capable of receiving any denomination which we may please to bestow on them? Is it arbitrarily and without any reason whatever, that we do not

* It is proper to remark, in introducing this passage from Dr. Brown, that this acute writer is to be considered as expressing himself too strongly, when he asserts, as he does near the close of it, that the feeling of resemblance is *all*, that the general name truly designates. Possibly he meant to convey by this assertion nothing more than this, that the feeling of resemblance is the prominent and distinguishing circumstance in the notions, expressed by general names ; since, in another passage, he speaks of general terms being “invented to express all that multitude of *objects*, which agree in exciting one common feeling of relation, the relation of a certain similarity.” If that were not his intention, then we are to consider his views as correct only so far as they go, and are to form a complex notion, which is both general and abstract, by combining the feeling of resemblance, the existence of which he has so clearly demonstrated, with the notion of those properties, which are found to be possessed in common.

class a rose-bush with birds, or an elephant with fish? and if there be any reason for these exclusions, why will not the Nominalist tell us what that reason is—in what feeling it is found—and how it can be made accordant with his system? Must it not be that the rose-bush and a sparrow, though equally perceived by us, do not excite that general notion of resemblance which the term *bird* is invented to express—do not seem to us to have those relations of a common nature, in certain respects, which lead us to class the sparrow and the ostrich, however different in other respects, as birds; or the petty natives of our brooks and rivulets with the mighty monsters of the deep, under one general and equal denomination? If this be the reason, there is more in every case, than perception, and the giving of a general name; for there is a peculiar state of mind—a general relative feeling—intervening between the perception and the invention of the term, which is the only reason that can be assigned for that very invention.”

§. 263. *Further remarks of Brown on general abstractions.*

“Can the Nominalist then assert, that there is no feeling of the resemblance of objects, in certain respects, which thus intervenes between the perception of them as separate objects, which is one stage of the process, and the comprehension of them under a single name, which is another stage of the process,—or must he not rather confess, that it is merely in consequence of this intervening feeling we give to the number of objects their general name, to the exclusion of the multitudes of objects to which we do not apply it, as it is in consequence of certain other feelings, excited by them individually, we give to each separate object its proper name, to the exclusion of every other object? To repeat the process, as already described to you, we perceive two or more objects,—we are struck with their resemblance in certain respects. We invent a general name to denote this feeling of resemblance, and we class under this general name, every particular object, the perception of which is followed by the same feeling

of resemblance, and no object but these alone. If this be a faithful statement of the process, and for its fidelity I may safely appeal to your consciousness,—the doctrine of the Nominalists is not less false than that of the Realists. It is false, because it excludes that general feeling of resemblance,—the relative suggestion,—which is all that the general name itself truly designates, and without which therefore, it never would have been invented ; while the doctrine of the Realists is false, by inserting in the process those supposed separate entities, which form no part of it. The one errs, as I have already said, by excess, the other by deficiency.”

NOTE. On the particular subject of universal or general abstract ideas, see Des Cartes, *PRINCIPIA*, PT. I. §. 59. ; Berkeley's *Principles of Human Knowledge*, *INTRODUC.* §. 9—22. ; Brucker's *History of Philosophy*, Bk. VII. CH. III. §. 2. ; Bayle, *ART. Abelard*, Note C. ; De Gerando's *Systems of Philosophy (Histoire Comparee)* PT. I. CHS. XXVI, XXVIII., Locke's *Essay*, Bk. III. CH. III. §. 9., Bk. IV. CH. VII. §. 9. ; Adam Smith's *Ancient Logic and Metaphysics* ; Stewart's *Elements*, CH. IV. ; Brown's *Philosophy of the Mind*, *LECT. XLVII*, Reid on the Intellectual Powers of Man, *Essay V*, &c. For some valuable remarks on the proper understanding of the Idealism of Plato, see Cousin's *Nouveaux Fragmens*, *Art. Plato*.

CHAPTER FOURTEENTH.

OF ATTENTION.

§. 264. *Of the general nature of attention.*

WITHOUT considering it necessary to speak of attention as a separate intellectual power or faculty, as some may be inclined to do, it seems to be sufficient to say, that **ATTENTION** expresses the state of the mind, when it is steadily directed, for a length of time, to some object of sense or intellect, exclusive of other objects. When we say, that any external object, or any subject of thought, which is purely internal, receives attention, it seems to be the fact, as far as we are able to determine, that the mind is occupied with the subject of its attention, whatever it is, for a certain period, and that all other things are, for the time being, shut out. In other words, the grasp, which the mind fixes upon the object of its contemplations, is an undivided, an unbroken one.

But it is natural to inquire, How this differs from the direction of the mind to a subject in any other case? Since in all instances, the mind, for the time being, is in one state merely ; it always embraces one subject or part of a subject, exclusive of others.—The answer to be given to this inquiry is, that in **ATTENTION** the direction of the mind to a particular subject, or, (what is the same thing,) its continuance in a particular state or series of states, is accompanied with a feeling of preference, desire, or interest;

which feeling of desire is the cause of that continuance. So that in all cases of attention, the act of the mind is a complex one, involving two things, (1) The mere thought or series of thoughts, (2,) The accompanying emotion of interest, which prevents that continual change in the thought, which would otherwise happen.

§. 265. *Of different degrees of attention.*

In agreement with this view of the subject, we often speak of attention as great or small, as existing in a very high or a very slight degree. When the view of the mind is only momentary, and is unaccompanied, as it generally is at such times, with any force of emotion ; then the attention is said to be slight. When it bends itself upon a thought or series of thoughts with earnestness, and for a considerable length of time, and refuses to attend to any thing else ; then the attention is said to be intense.

We commonly judge at first of the degree of attention to a subject from the length of time, during which the mind is occupied with it. But when we look a little further, it will be found, that the time will generally depend upon the strength and permanency of the attendant emotion of interest. And hence both the time and the degree of feeling are to be regarded in our estimate of the power of attention in any particular case ; the former being the result, and, in some sense, a measure of the latter.

Of instances of people, who are able to give but slight attention to any subject of thought, who cannot bring their minds to it with steadiness and power, we every where find multitudes ; and there are some instances, where this ability has been possessed in such a high degree as to be worthy of notice. There have been mathematicians, who could investigate the most complicated problems amid every variety and character of disturbance. It was said of Julius Cæsar, that, while writing a despatch, he could at the same time dictate four others to his secretaries, and if he did not write himself, could dictate seven letters at once. The same thing is asserted also of the emperor Napoleon, who had a wonderful capability of di-

recting his whole mental energy to whatever came before him.*

The chess-player Philidor could direct three games of chess at the same time, of one of which only he required ocular inspection, the moves of the other two being announced to him by an assistant. The moves of the chessmen formed the subject, about which his thoughts were employed, and such was the intensity of interest, that the mind found no difficulty in dwelling upon it to the exclusion of other subjects, and for a considerable length of time.

§. 266. *Dependence of memory on attention.*

There seems to be no fact in mental philosophy more clearly established than this, that memory depends on attention; that is, where attention is very slight, remembrance is weak, and where attention is intense, remembrance continues longer. The following statement of Mr. Hobbes, in his political treatise of the Leviathan, will tend to illustrate this fact.—He says, he was once in company, where the conversation turned on the English civil war. A person abruptly asked, in the course of the conversation, What was the value of a Roman denarius? Such a question, so remote from the general direction of the conversation, had the appearance not only of great abruptness, but of impertinence. Mr. Hobbes says, that, on a little reflection, he was able to trace the train of thought, which suggested the question. The original subject of discourse naturally introduced the history of king Charles; the king naturally suggested the treachery of those, who surrendered him up to his enemies; the treachery of these persons readily introduced to the mind the treachery of Judas Iscariot; the conduct of Judas was associated with the thirty pieces of silver, and as the Romans occupied Judea at the time of the crucifixion of the Saviour, the pieces of silver were associated with the Roman denarii. All these trains of thought passed through the mind of the person, who asked the question, in a

* Segur's History of the Expedition to Russia, Bk. VII, ch. 13.

twinkling ; and with good reason Mr. Stewart, in remarking on this anecdote, thinks it not improbable, that he would himself have been unable readily to state the train of ideas, which led to the unexpected inquiry.—Every one is able to detect analogous facts in his own mental experiences. We unexpectedly find ourselves reflecting on a subject, to which we must have been conducted by a long concatenation of thought. But the preceding series, which conducted to the present subject of our meditations, occupied our attention for so short a time, that no foundation was laid for the memory, and it has irretrievably vanished.

§. 267. *Further illustrations of the dependence of memory on attention.*

There are other facts perhaps of a still more obvious and satisfactory nature, which confirm the principle under consideration.—In the course of a single day persons, who are in the habit of winking, will close their eyelids perhaps thousands of times, and as often as they close them, will place themselves in utter darkness. Probably, they are conscious at the time both of closing their eyelids and of being in the dark, but as their attention is chiefly taken up with other things, they have entirely forgotten it.

(2) Let a person be much engaged in conversation, or occupied with any very interesting speculation, and the clock will strike in the room where he is, apparently without his having any knowledge of it. He hears the clock strike as much as at any other time, but, not attending to the perception of sound and having his thoughts directed another way, he immediately forgets.

(3) In the occupations of the day, when toils, and tumults, and cares are pressing us on every side, a thousand things escape our notice ; they appear to be neither seen nor heard, nor to affect us in any way whatever. But at the stillness of evening, when toils are quieted, and there is a general pause in nature, we seem to be endued with a new sense, and the slightest sound attracts our attention. Shakspeare has marked even this.

" The crow doth sing as sweetly as the lark
 " When neither is attended ; and, I think,
 " The nightingale, if she should sing by day,
 " When every goose is cackling, would be thought
 " No better a musician than the wren."

It is on the same principle, that people, dwelling in the vicinity of waterfalls, do not appear to notice the sound. The residents in the neighbourhood even of the great Cataract of Niagara are not seriously disturbed by it, although it is an unbroken, interminable thunder to all others.—The reason in all these cases is the same, as has already been given. There is no attention, and no remembrance, and of course virtually no perception.

(4) Whenever we read a book, we do not observe the words merely as a whole, but every letter of which they are made up, and even the minute parts of these letters. But it is merely a glance ; it does not for any length of time occupy our attention ; we immediately forget, and with great difficulty persuade ourselves, that we have truly perceived the letters of the word. The fact, that every letter is in ordinary cases observed by us, may be proved by leaving out a letter of the word, or by substituting others of a similar form. We readily in reading detect such omissions or substitutions.

(5) An expert accountant can sum up, almost with a single glance of the eye, a long column of figures. The operation is performed almost instantaneously, and yet he ascertains the sum of the whole with unerring certainty. It is impossible, that he should learn the sum without noticing every figure in the whole column, and without allowing each its proper worth ; but the attention to them was so very slight, that he is unable to remember this distinct notice.

Many facts of this kind evidently show, as we think, that memory depends upon attention or rather upon a continuance of attention, and varies with that continuance.

§. 268. *Of exercising attention in reading, &c.*

If attention, as we have seen, be requisite to memory,

then we are furnished with a practical rule of considerable importance. The rule is, Not to give a hasty and careless reading of authors, but to read them with a suitable degree of deliberation and thought.—It is the fault of some persons, that they are too quickly weary, that they skip from one author to another, and from one sort of knowledge to another. It is true, there are many things to be known ; we would not have a person limit himself entirely to one science, but it is highly important, that he should guard against that rapid and careless transition from subject to subject, which has been mentioned.

If we be asked the reason of this direction, we find a good and satisfactory one in the fact referred to at the head of this section, that there cannot be memory without attention, or rather that the power of memory will vary with the degree of attention. By yielding to the desire of becoming acquainted with a greater variety of departments of knowledge, than the understanding is able to master, and, as a necessary consequence, by bestowing upon each of them only a very slight attention, we remain essentially ignorant of the whole.

The person, who pursues such a course, finds himself unable to recal what he has been over ; he has a great many half-formed notions floating in his mind, but these are so ill shaped and so little under his control as to be but little better than actual ignorance. This is one evil result of reading authors and of going over sciences in the careless way, which has been specified, that the knowledge thus acquired, if it can be called knowledge, is of very little practical benefit, in consequence of being so poorly digested, and so little under control.

But there is another and perhaps more serious evil. This practice greatly disqualifies one for all intellectual pursuits. To store the mind with new ideas is only a part of education. It is at least a matter of equal importance, to impart to all the mental powers a suitable discipline, to exercise those that are strong, to strengthen those that are weak, and to maintain among all of them a suitable balance. An attentive and thorough examination of subjects

is a training up of the mind in both these respects. It furnishes it with that species of knowledge, which is most valuable, because it is not mixed up with errors; and moreover, gives a strength and consistency to the whole structure of the intellect. Whereas, when the mind is long left at liberty to wander from object to object, without being called to account and subjected to the rules of salutary discipline, it entirely loses at last the ability to dwell upon the subjects of its thoughts, and to examine them. And when this power is once lost, there is but little ground to expect any solid attainments.

§. 269. *Alleged inability to command the attention.*

We are aware that those, who are required to follow the directions above given as to a close and thorough examination of subjects, will sometimes complain, that they find a great obstacle in their inability to fix their attention. They are not wanting in ability to comprehend, but find it difficult to retain the mind in one position so long, as to enable them to connect together all the parts of a subject, and duly estimate their various bearings. When this intellectual defect exists, it becomes a new reason for that thorough examination of subjects, which has been above recommended. It has probably been caused by a neglect of such strictness of examination, and by a too rapid and careless transition from one subject to another.

ATTENTION, it will be recollected, expresses the state of the mind, when it is steadily directed for some time, whether longer or shorter, to some object of sense or intellect, exclusive of other objects. All other objects are shut out; and when this exclusion of every thing else continues for some time, the attention is said to be intense.

Now it is well known, that such an exclusive direction of the mind cannot exist for any long period, without being accompanied with a feeling of desire or interest. In the greatest intellectual exertions, not the mere powers of judging, of abstracting, and of reasoning, are concerned; there will also be a species of excitement of the feelings. And it will be found, that no feeling will effectually con-

fine the minds of men in scientific pursuits, but a love of the truth.

Mr. Locke thought, that the person, who should find out a remedy for the wandering of thoughts, would do great service to the studious and contemplative part of mankind. We know of no other remedy, than the one just mentioned, A LOVE OF THE TRUTH, a desire to know the nature and relations of things, merely for the sake of knowledge. It is true, that a conviction of duty will do much ; ambition and interest may possibly do more ; but when the mind is led to deep investigations by these views merely, it is a tiresome process, and after all is ineffectual. Nothing but a love of the truth for its own sake will permanently keep off the intrusions of foreign thoughts, and secure a certainty of success. The excellency, therefore, of knowledge, considered merely as suited to the intellectual nature of man, and as indicative of the character of that Being, who is the true source of all knowledge and the fashioner of all intellect, cannot be too frequently impressed.

The person, who is capable of strictly fixing his attention, will have a great advantage over others. Of two persons, who seem naturally to have equal parts, the one, who possesses this characteristic, will greatly excel. So that it is hardly too much to say, that it may become a sort of substitute for genius itself.

CHAPTER FIFTEENTH.

DREAMING.

§. 270. *Definition of dreams and the prevalence of them.*

AMONG numerous other subjects in mental philosophy, which claim their share of attention, that of Dreaming is entitled to its place ; nor can we be certain, that any other will be found more appropriate to it than the present, especially when we consider, how closely it is connected in all its forms with our sensations and conceptions. And what are Dreams? It approaches perhaps sufficiently near to a correct general description to say, that they are our mental states and operations while we are asleep. But the particular views, which are to be taken in the examination of this subject, will not fail to throw light on this general statement.

The mental states and exercises, which go under this name, have ever excited much interest. It is undoubtedly one reason of the attention, which the subject of our dreams has ever elicited among all classes of people, that they are so prevalent ; it being very difficult, if not impossible, to find a person, who has not had more or less of this experience. Mr. Locke, however, tells us of an individual, who never dreamed till the twenty sixth year of his age, when he happened to have a fever, and then dreamed for the first time. Plutarch also mentions one Cleon, a friend of his, who lived to an advanced age, and yet had never

dreamed once in his life, and remarks, that he had heard the same thing reported of Thrasymedes.

Undoubtedly these persons dreamed very seldom, as we find that some dream much more than others ; but it is possible, that they may have dreamed at some times, and entirely forgotten it. ' So that it cannot with certainty be inferred from such instances as these, that there are any, who are entirely exempt from dreaming.

§. 271. *Connection of dreams with our waking thoughts.*

In giving an explanation of dreams, our attention is first arrested by the circumstance, that they have an intimate relationship with our waking thoughts. The great body of our waking experiences appear in the form of trains of associations ; and these trains of associated ideas, in greater or less continuity, and with greater or less variation, continue when we are asleep. Many facts show this.

Condorcet, (a name famous in the history of France,) told some one, that, while he was engaged in abstruse and profound calculations, he was frequently obliged to leave them in an unfinished state, in order to retire to rest; and that the remaining steps and the conclusion of his calculations have more than once presented themselves in his dreams.—Franklin also has made the remark, that the bearings and results of political events, which had caused him much trouble while awake, were not unfrequently unfolded to him in dreaming.—“ In my sleepless nights, and in my *dreams*, (says Fouché, when fleeing into Italy in consequence of certain alleged political heresies,) I imagined myself surrounded by executioners, and seemed, as if I beheld, in the native country of Dante, the inexorable vision of his infernal gates.”*

It seems clearly to follow from such statements as these, which are confirmed by the experience of almost every person, that our dreams are fashioned from the ma-

* Memoirs of Fouché, duke d'Otranto, minister of the General Police of France, p. 267.

materials of the thoughts which we have while awake ; in other words they will, in a *great* degree, be merely the repetition of our customary and prevailing associations.

§. 272. *Dreams are often caused by our sensations.*

But while we are to look for the materials of our dreams in thoughts which had previously existed, we further find that they are not beyond the influence of those slight bodily sensations, of which we are susceptible even in hours of sleep. These sensations, slight as they are, are the means of introducing one set of associations rather than another.

Dugald Stewart relates an incident, which may be considered an evidence of this, that a person, with whom he was acquainted, had occasion, in consequence of an indisposition, to apply a bottle of hot water to his feet when he went to bed, and the consequence was, that he dreamed he was making a journey to the top of mount *Ætna*, and that he found the heat of the ground almost insupportable. There was once a gentleman in the English army, who was so susceptible of audible impressions, while he was asleep, that his companions could make him dream of what they pleased. Once, in particular, they made him go through the whole process of a duel, from the preliminary arrangements to the firing of the pistol, which they put into his hand for that purpose, and which, when it exploded, waked him.

A cause of dreams closely allied to the above is the variety of sensations, which we experience from the stomach, viscera, &c.—Persons, for instance, who have been for a long time deprived of food, or have received it only in small quantities, hardly enough to preserve life, will be likely to have dreams, in some way or other directly relating to their condition. Baron Trenck relates, that being almost dead with hunger, when confined in his dungeon, his dreams every night presented to him the well filled and luxurious tables of Berlin, from which, as they were presented before him, he imagined he was about to relieve his hunger. “ The night had far advanced, (says Irving,

speaking of the voyage of Mendez to Hispaniola,) but those, whose turn it was to take repose, were unable to sleep from the intensity of their thirst ; or if they slept, it was but to be tantalized with dreams of cool fountains and running brooks."

The state of health also has considerable influence, not only in producing dreams, but in giving them a particular character. The remark has been made by medical men, that acute diseases, particularly fevers, are often preceded and indicated by disagreeable and oppressive dreams.

§. 273. *Explanation of the incoherency of dreams. (1st cause.)*

There is frequently much of wildness, inconsistency, and contradiction in our dreams. The mind passes very rapidly from one object to another ; strange and singular incidents occur. If our dreams be truly the repetition of our waking thoughts, it may well be inquired, How this wildness and inconsistency happen ?

The explanation of this peculiarity resolves itself into two parts.—The **FIRST** ground or cause of it is, that our dreams are not subjected, like our waking thoughts, to the control and regulation of surrounding objects. While we are awake, our trains of thought are kept uniform and coherent by the influence of such objects, which continually remind us of our situation, character, and duties ; and which keep in check any tendency to reverie. But in sleep the senses are closed ; the soul is accordingly in a great measure excluded from the material world, and is thus deprived of the salutary regulating influence from that source.

§. 274. *Second cause of the incoherency of dreams.*

In the second place, when we are asleep, our associated trains of thought are no longer under the control of the mental power or susceptibility, which we term the **WILL**. We do not mean to say, that the operations of that susceptibility are suspended at such times, and that volitions have no existence. On the contrary, there is sufficient evidence of the continuance of its exercises in some

degree; since volitions must have made a part of the original trains of thought, which are repeated in dreaming; and furthermore, we are often as conscious of exercising or putting forth volitions when dreaming as of any other mental acts, for instance imagining, remembering, assenting, or reasoning. When we dream, that we are attacked by an enemy sword in hand, but happen as we suppose in our dreaming experiences, to be furnished in self-defence with an instrument of the same kind, we dream, that we *will* to exert it for our own safety and against our antagonist, and we as truly in this case put forth the mental exercise which we term *volition*, as, in any other, we exercise remembrance, or imagine, or reason in our sleep.

Admitting that the power or susceptibility of willing continues to act in sleep, it is quite evident, that the volitions, which are put forth by it, have ceased to exercise their customary influence in respect to our mental operations. But here it will be said, that the will is unable to exercise a direct influence over the successions of thought, even when we are awake. This point has been already examined sufficiently. (See §.235.) The conclusion, at which we there arrived, was, that, although we have no direct, we have an indirect power over the successions of thought, which is very considerable; for instance, by means of a feeling of desire or interest we fix our attention upon some particular part of any general subject, which has been suggested, and thus give a new direction to the whole train of mental operations. Although this power, which we thus exercise, is indirect, we justly consider it a voluntary power, and attribute it to the faculty of the will. But the moment we are soundly asleep, this influence ceases, and hence in connection with the other cause above mentioned, arise the wildness, incoherency, and contradictions, which exist.

A person while he is awake has his thoughts, (admitting to the full extent the power which is commonly ascribed to association,) under such government, and is able, by the indirect influence of volitions, so to direct them, as to bring them in the end to some conclusion, which he

foresees, and which he wishes to arrive at. But in dreaming, as all directing and governing influence, both internal and external, is at an end, our associations seem to be driven forward, much like a ship at sea without a rudder, wherever it may happen.

§ . 275. *Apparent reality of dreams. (1st cause.)*

When objects are presented to us in dreams, we look upon them as real ; and events, and combinations and series of events appear the same. We feel the same interest and resort to the same expedients, as in the perplexities or enjoyments of real life. When persons are introduced, as forming a part in the transactions of our dreams, we see them clearly in their living attitudes and stature ; we converse with them, and hear them speak, and behold them move, as if actually present.

One reason of this greater vividness of our dreaming conceptions and of our firm belief in their reality seems to be this. The subjects, upon which our thoughts are then employed, occupy the mind exclusively. We can form a clearer conception of an object with our eyes shut, than we can with them open, as any one will be convinced on making the experiment ; and the liveliness of the conception will increase in proportion, as we can suspend the exercise of the other senses. In sound sleep, not only the sight, but the other senses also may be said to be closed ; and the attention is not continually diverted by the multitude of objects, which arrest the hearing and touch, when we are awake.

It is, therefore, a most natural supposition, that our conceptions must at such times be extremely vivid and distinct. At §. 219, we particularly remarked upon conceptions or those ideas which we have of absent objects of perception, which possess this vividness of character. And it there appeared, that they might be attended with a momentary belief even when we are awake. But as conceptions exist in the mind when we are asleep in a much higher degree distinct and vivid, what was in the former case a momentary, becomes in the latter a permanent be-

lief. Hence every thing has the appearance of reality ; and the mere thoughts of the mind are virtually transformed into persons, and varieties of situation, and events, which are regarded by us in precisely the same light as the persons, and situations, and events of our every day's experience.

§. 276. *Apparent reality of dreams. (2d cause.)*

A second circumstance, which goes to account for the fact that our dreaming conceptions have the appearance of reality is, that they are not susceptible of being controlled, either directly or indirectly, by mere volition.—We are so formed as almost invariably to associate reality with whatever objects of perception continue to produce in us the same effects. A hard or soft body, or any substance of a particular colour, or taste, or smell, are always, when presented to our senses, followed by certain states of mind essentially the same ; and we yield the most ready and firm belief in the existence of such objects. In a word, we are disposed from our very constitution to believe in the existence of objects of perception, the perceptions of which do not depend on the WILL, but which we find to be followed by certain states of the mind, whether we choose it or not.—But it is to be recollected, that our dreaming thoughts are mere conceptions ; our senses being closed and shut up, and external objects not being presented to them. This is true. But if we conclude in favor of the real existence of objects of perception, because they produce in us sensations independently of our volitions, it is but natural to suppose, that we shall believe in the reality of our conceptions also, whenever they are in like manner beyond our voluntary control. They are both merely states of the mind ; and if belief always attends our perceptions, wherever we find them to be independent of our choice, there is no reason, why conceptions, which are ideas of absent objects of perception, should not be attended with a like belief under the same circumstances.—And essentially the same circumstances exist in dreaming ; that is, a train of concep-

tions arise in the mind, and we are conscious at such times of being unable to exercise any direction or control whatever over them. They exist, whether we will it or not ; and we regard them as real.

§. 277. *Of our estimate of time in dreaming.*

Our estimate of time in dreaming differs from that when awake. Events, which would take whole days or a longer time in the performance, are dreamt in a few moments. So wonderful is this compression of a multitude of transactions into the very shortest period, that when we are accidentally awakened by the jarring of a door, which is opened into the room where we are sleeping, we sometimes dream of depredations by thieves, or destruction by fire, in the very instant of our awaking.—Our dreams will not unfrequently go through all the particulars of a passage of the Alps, or of a military expedition to Moscow, or of a circumnavigation of the globe, or of other long and perilous undertakings, in a less number of hours, than it took weeks, or months, or even years in the actual performance of them. We go from land to land, and from city to city, and into desert places ; we experience transitions from joy to sorrow, and from poverty to wealth ; we are occupied in the scenes and transactions of many long months ; and then our slumbers are scattered, and, behold, they are the doings of a single watch of the night!

This striking circumstance in the history of our dreams is generally explained by supposing, that our thoughts, as they successively occupy the mind, are more rapid, than while we are awake. But their rapidity is at all times very great ; so much so, that, in a few moments, crowds of ideas pass through the mind, which it would take a long time to utter, and a far longer time would it take to perform all the transactions which they concern. This explanation, therefore, is not satisfactory, for our thoughts are oftentimes equally rapid in our waking moments.

The true reason, we apprehend, is to be found in those preceding sections, which took under examination the

apparent reality of dreams. Our conceptions in dreaming are considered by us real; every thought is an action; every idea is an event; and successive states of mind are successive actions and successive events. He, who in his sleep has the conception of all the particulars of a military expedition to Moscow, or of a circumnavigation of the globe, seems to himself to have actually experienced all the various and multiplied fortunes of the one and the other. Hence what appears to be the real time in dreams, but is only the apparent time, will not be that, which is sufficient for the mere thought, but that, which is necessary for the successive actions.

“Something perfectly analogous to this may be remarked (says Mr. Stewart) in the perceptions we obtain by the sense of sight.* When I look into a shew-box, where the deception is imperfect, I see only a set of paltry daubings of a few inches in diameter; but if the representation be executed with so much skill, as to convey to me the idea of a distant prospect, every object before me swells in its dimensions, in proportion to the extent of space, which I conceive it to occupy, and what seemed before to be shut within the limits of a small wooden frame, is magnified, in my apprehension, to an immense landscape of woods, rivers, and mountains.”

§. 278. *Of the senses sinking to sleep in succession.*

It is true as a general statement, that in sleep the mind ceases to retain its customary power over the muscular movements of the system; and all the senses also are at such times locked up, and no longer perform their usual offices. The effect upon the senses is such, that it seems to be proper to speak of them as individually going to sleep, and awaking from sleep. It remains, therefore, to be observed, that there is some considerable reason to suppose, that the senses fall asleep in succession.—For a detailed explanation and proof of this singular fact, reference must be had to Cullen, and particularly to Cabanis, a French writer on subjects of this nature; but the con-

*Stewart's Elements, Chapter on Dreaming.

clusions, at which they arrive on this particular point, may be here stated.*

The sight, in consequence of the protection of the eyelids, ceases to receive impressions first, while all the other senses preserve their sensibility entire; and may, therefore, be said to be first in falling asleep. The sense of taste, according to the above writers, is the next, which loses its susceptibility of impressions, and then the sense of smelling. The hearing is the next in order, and last of all comes the sense of touch.

Furthermore, the senses are thought to sleep with different degrees of profoundness. The senses of taste and smelling awake the last; the sight with more difficulty than the hearing, and the touch the easiest of all. Sometimes a very considerable noise does not awake a person, but if the soles of his feet are tickled in the slightest degree, he starts up immediately.

Similar remarks are made by the writers above referred to, on the muscles. Those, which move the arms and legs, cease to act when sleep is approaching, sooner than those, which sustain the head; and the latter before those, which support the back.—And here it is proper to notice an exception to the general statement at the commencement of this section, that the mind in sleep ceases to retain its power over the muscles. Some persons can sleep standing, or walking, or riding on horseback: with such we cannot well avoid the supposition, that the voluntary power over the muscles is in some way retained and exercised in sleep.—These statements are particularly important in connection with the facts of somnambulism; only admit, that the susceptibility of the senses, and the power of the muscles may remain even in part while we are asleep, and we can account for them. We know, that this is not the case in a vast majority of instances but that it does sometimes happen, is a point, which seems at last to be sufficiently well established.

*Rapports du Physique et du Moral De L'Homme, Mem. x.

§. 279. *General remarks on cases of somnambulism.*

With the general subject of dreaming, that of somnambulism is naturally and intimately connected. Somnambulists are persons, who are capable of walking and of other voluntary actions while asleep. Some of the facts in respect to them are these.—The senses are in general closed, and are not susceptible of being affected by outward objects, much the same as in ordinary sleep ; with some slight exceptions, however, hereafter to be mentioned. Hence the somnambulist goes from place to place, and performs other voluntary actions without the use of vision ; and yet in some cases he has his eyes open, but is still unable to see. Doing the works of day at unseasonable hours, he piles up his wood at midnight, or yokes his oxen, or ploughs his field, or goes to mill, and all the while is as profoundly asleep as any of his neighbors ; until he falls over some obstacle at his feet, or rides against a tree, or is in some other way brought to his recollection. He is not certain of walking in safe places, but may sometimes be found on the roof of houses or on the edge of precipices, but evidently with an utter insensibility to terror. He is a sort of automatic machine that is carried about from place to place, but without feeling, vision, hearing, or other exercises of the senses ; and still more without calculation, or any thing, which may be truly called reasoning ; always excepting such calculation and reasoning as may be found in dreams *

* The following is an instance of somnambulism, which recently took place, of an extraordinary character.—A farmer in one of the counties of Massachusetts had employed himself, for some weeks in winter, thrashing his grain. One night as he was about closing his labours, he ascended a ladder to the top of the great beams in the barn, where the rye, which he was thrashing, was deposited, to ascertain what number of bundles remained unthrashed, which he determined to finish the next day. The ensuing night, about two o'clock, he was heard by one of the family to arise and go out. He repaired to his barn, being sound asleep and unconscious of what he was doing, set open his barn doors, ascended the great beams of the barn where his rye was deposited, threw down a flooring, and commenced thrashing it. When he had completed it, he raked off the straw, and shoved the

Of such persons many instances are on record, and of some a particular account is given. The accompanying instance in the note will help to illustrate the above assertions, which, as a general statement, are sufficiently near the truth. Other instances in somnambulism, hardly less striking, might be repeated, but they have been too often narrated, and are of too frequent recurrence, to require it.

§. 280. *Explanation of cases of somnambulism.*

But the inquiry now is, How can these things happen? How can men act and move in this way in sleep, which, in all ordinary cases, implies a deprivation of the muscular power, as well as the closure of the senses.—The explanation, so far as it presents itself at first, is this, viz, (1) The somnambulist is in all cases dreaming, and we may suppose in general, that the dream is one, which greatly interests him.—(2) Those volitions, which are a part of his dreams, retain their power over the muscles, which is not the fact in the sleep and the dreaming of the great body of people.

Consequently, whatever the somnambulist dreams is not only real in the mind, as in all other dreamers, but his

rye to one side of the floor, and then again ascended the ladder with the straw and deposited it on some rails, that lay across the great beams. He then threw down another flooring of rye, which he thrashed and finished as before. Thus he continued his labours until he had thrashed five floorings, and on returning from throwing down the sixth and last, in passing over part of the hay-mow, he fell off, where the hay had been cut down about six feet, on to the lower part of it, which awoke him. He at first imagined himself in his neighbour's barn, but after groping about in the dark for a long time, ascertained that he was in his own, and at length found the ladder, on which he descended to the floor, closed his barn doors, which he found open, and returned to his house. On coming to the light, he found himself in such a profuse perspiration, that his clothes were literally wet through. The next morning on going to his barn, he found that he had thrashed, during the night, five bushels of rye, had raked the straw off in good order, and deposited it on the great beams, and carefully shoved the grain to one side of the floor, without the least consciousness of what he was doing until he fell from the hay.

ability to exercise his muscles enables him to give it a reality in action. Whether he dream of writing a letter, of visiting a neighbour's house, of thrashing his grain, or ploughing his field, his muscles are faithful to his vivid mental conceptions, which we may suppose in all cases closely connected with his customary labours and experiences, and carry him pretty safely through the operation, however sightless may be his eye, or dull his other senses.

These are the views, which first present themselves in the way of explanation. But the inquiry again arises, How it happens, while, in most cases, both senses and muscles lose their power, in these on the contrary, the muscles are active, while the senses alone are asleep?—In reference to this inquiry, it must be acknowledged, that it is involved at present in some uncertainty, although there is much reason to anticipate, that it may hereafter receive light from further investigations and knowledge of the nervous system and functions. There is a set of nerves, particularly connected with respiration, which appear to have nothing to do with sensation and with muscular action. There is another set, which are known to possess a direct and important connection with sensation and the muscles. These last are separable into distinct filaments, having separate functions; some being connected with sensation merely, and others with volition and muscular action. In sensation the impression, made by some external body, exists at first in the external part of the organ of sense, and is propagated along one class of filaments to the brain. In volition and voluntary muscular movement, the origin of action, as far as the body is concerned, seems to be the reverse, commencing in the brain, and being propagated along other and appropriate nervous filaments to the different parts of the system. And these last-mentioned, in order to cause muscular action, require continuity and soundness not less than those, connected with sensation. Hence it sometimes happens, that, in diseases of the nervous system, the power of sensation is, in a great measure, lost, while that of motion fully remains. If the interesting

and recently developed facts now referred to should, on further examination, be fully established, they will evidently help to explain the difficulty under consideration. Causes unknown to us may operate, through their appropriate nervous filaments, to keep the muscles awake, without disturbing the repose and inactivity of the senses.

Further ; We are not to forget here a remark on the sleep of the senses, a subject already briefly alluded to, and which is an exception to the general statement then made in regard to them. Both in somnambulism and in ordinary cases of dreaming the senses are not always entirely locked up ; many observations clearly show, that it is possible for the mind to be accessible through them, and that a new direction may be given in this way to a person's dreams without awaking him. Hence somnambulists may sometimes have very slight visual perceptions ; they may in some slight measure be guided by sensations of touch ; all the senses may be affected in a small degree by their appropriate objects, or this may be the case with some and not with others, without effectually disturbing their sleep.—These facts will be found to help in explaining any peculiar circumstances, which may be thought not to come within the reach of the general explanation, which has been given.

CHAPTER SIXTEENTH.

THE BLIND BOY RESTORED BY CHESELDEN.

§. 281. *Importance of a constant recurrence to facts.*

It is desirable, that mental philosophy should be placed as far as possible on the basis of fact and observation. The general principle, that all sound science must be built on a careful induction from particular facts, is as applicable to that department of knowledge as any other. So obvious must be this truth, that it is needless to take up time in enforcing it. It is not with less profit than pleasure therefore, that we read the life of Massieu, the deaf and dumb pupil of Sicard, the Account of the blind man of Puiseaux, the Memoir of Nicolai illustrative of the apparitions that so often beset him, and the like. Where statements are given, which, like the memoirs referred to, come from a source entitled to confidence, and are made with care, we rest with satisfaction on the principles, which they disclose.

It is perhaps humbling to pride of intellect, to check speculation in the dull and tame pursuit and comparison of facts, but it is undoubtedly necessary to the interests of sound philosophy. This truth we have endeavored to keep constantly in view, and have not advanced a single opinion, without imagining at least, that we had facts to support it. So deeply impressed are we with the importance of a constant recurrence to facts, that we shall conclude this

part of the sketch of the Human Mind with laying before the reader Cheselden's narrative of a youth who was couched for the cataract, and some facts in relation to James Mitchell, a boy both deaf and blind. They are introduced in this place, because they have a peculiarly intimate connection with the series of topics now before us, however they may suggest some considerations having a relation to other views of the mind ; and they certainly cannot be read without some advantage, and without exciting an interest. We shall give Cheselden's simple and satisfactory account precisely as it stands, which is as follows.

§. 282. - *The blind with cataracts may yet have some faint visual sensations.*

“ Though we say of this gentleman that he was blind, as we do of all people who have ripe cataracts, yet they are never so blind from that cause but that they can discern day from night, and for the most part, in a strong light, distinguish black, white, and scarlet ; but they cannot perceive the shape of any thing ; for the light by which these perceptions are made, being let in obliquely through the aqueous humour, or the anterior surface of the crystalline, by which the rays cannot be brought into a focus upon the retina, they can discern in no other manner, than a sound eye can through a glass of broken jelly, where a great variety of surfaces so differently refract the light, that the several distinct pencils of rays cannot be collected by the eye into their proper foci ; wherefore the shape of an object in such a case cannot be at all discerned, though the colour may : And thus it was with this young gentleman, who, though he knew these colours asunder in a good light, yet when he saw them after he was couched, the faint ideas he had of them before, were not sufficient for him to know them by afterwards, and therefore he did not think them the same which he had before known by those names. Now scarlet he thought the most beautiful of all colours, and of others the most gay were the most pleasing ; whereas the first time he saw black it gave him great uneasiness, yet after a little time

he was reconciled to it ; but some months after, seeing by accident a negro woman, he was struck with great horror at the sight."

§. 283. *This person's inability, on being restored, to estimate distance and form.*

"When he first saw, he was so far from making any judgment about distances, that he thought all objects whatever touched his eyes (as he expressed it) as what he felt did his skin, and thought no objects so agreeable as those which were smooth and regular, though he could form no judgment of their shape, or guess what it was in any object that was pleasing to him. He knew not the shape of any thing, nor any one thing from another, however different in shape or magnitude ; but upon being told what things were, whose form he before knew from feeling, he would carefully observe, that he might know them again ; but having too many objects to learn at once, he forgot many of them ; and (as he said) at first he learned to know, and again forgot a thousand things in a day. One particular only, though it may appear trifling, I will relate. Having often forgot which was the cat, and which the dog, he was ashamed to ask ; but catching the cat, which he knew by feeling, he was observed to look at her steadfastly, and then, setting her down, said, So, puss, I shall know you another time. He was very much surprized, that those things which he had liked best, did not appear most agreeable to his eyes, expecting those persons would appear most beautiful that he loved most, and such things to be most agreeable to his sight, that were so to his taste. We thought he soon knew what pictures represented, which were shewed to him, but we found afterwards we were mistaken ; for about two months after he was couched, he discovered at once they represented solid bodies, when to that time he considered them only as party-coloured planes, or surfaces diversified with variety of paint ; but even then he was no less surprized, expecting the pictures would feel like the things they represented, and was amazed when he found those parts, which by

their light and shadow appeared now round and uneven, felt only flat like the rest, and asked which was the lying sense, feeling, or seeing?

“Being shewn his father’s picture in a locket at his mother’s watch, and told what it was, he acknowledged a likeness, but was vastly surprized; asking, how it could be, that a large face could be expressed in so little room, saying, it should have seemed as impossible to him, as to put a bushel of any thing into a pint.”

§. 284. *His perplexity in forming notions of relative magnitude.*

“At first, he could bear but very little light, and the things he saw, he thought extremely large; but upon seeing things larger, those first seen he conceived less, never being able to imagine any lines beyond the bounds he saw; the room he was in, he said, he knew to be but part of the house, yet he could not conceive that the whole house could look bigger. Before he was couched, he expected little advantage from seeing, worth undergoing an operation for, except reading and writing: for he said, he thought he could have no more pleasure in walking abroad than he had in the garden, which he could do safely and readily. And even blindness, he observed, had this advantage, that he could go any where in the dark much better than those who can see; and after he had seen, he did not soon lose this quality, nor desire a light to go about the house in the night. He said, every new object was a new delight; and the pleasure was so great, that he wanted words to express it; but his gratitude to his operator he could not conceal, never seeing him for some time without tears of joy in his eyes, and other marks of affection. And if he did not happen to come at any time when he was expected, he would be so grieved, that he could not forbear crying at his disappointment. A year after first seeing, being carried upon Epsom Downs, and observing a large prospect, he was exceedingly delighted with it, and called it a new kind of seeing. And now being lately couched of his other eye, he says, that

objects at first appeared large to this eye, but not so large as they did at first to the other ; and looking upon the same object with both eyes, he thought it looked about twice as large as with the first couched eye only, but not double, that we can any ways discover.

“I have couched several others who were born blind, whose observations were of the same kind ; but they being younger, none of them gave so full an account as this gentleman.”

§. 285. *Of facts supposed to be at variance with the fore-mentioned.*

There is an account in the London Philosophical Transactions of 1801 of a boy, who was restored to sight at seven years of age, after he had been blind from early infancy. The operation was performed by Mr. Ware. The statements of the operator have been imagined to be somewhat at variance with those of Cheselden. He says, that the handkerchief, which was tied over the patient's eyes, having slipped upward two days after the operation, he distinguished the table about a yard and a half from him, and observed, that it was covered with a green cloth. He afterwards distinguished a piece of paper, which was held before him, about twelve inches distant, and said it was square ; and in other instances indicated the form and colour of objects. But this statement is not necessarily a contradiction of Cheselden's, unless it can be shown, that the faint degree of sight, which both boys originally possessed, was precisely equal. Cheselden himself says, that persons afflicted with the cataract, are never so blind from that cause, but that they can discern day from night, and for the most part, in a strong light, distinguish black, white, and scarlet, &c.

“Of the correctness and fidelity of this statement, (says Dugald Stewart, referring to the facts above specified of Mr. Ware,) I have not the slightest doubt. But the only inference, which can, with certainty, be deduced from it is, that the patient saw too well *before* the operation, to make his perceptions *afterwards* of any value for

deciding the point in question. If he was able to recognize a *green cloth and a piece of white paper*, the very moment that the bandage was removed, the degree of sight, which he possessed previous to Mr. Ware's acquaintance with him, must have been such as to furnish him with a variety of sensations, quite sufficient to serve as materials for an imperfect *visual language*;—a language, if not accurately significant of comparative distances from the eye, at least fully adequate to convey, through the channel of that organ, the intimation of *distance in general*, or of what Berkeley calls *outness*;—perhaps also, some indistinct perception of diversities of *visible figure*. The slightest, and to us the most evanescent shades of difference in these sensations will, we may be assured, become, in the case of such an individual, signs of all the various changes in the state of surrounding objects, with which we have any connection.”*

§. 286. *Illustrations of this subject by Everard Home.*

In the Transactions of the Royal Society for 1807 there is a Paper by Everard Home, written expressly for the purpose of reconciling the supposed discrepancy in the accounts of Cheselden and Ware. Two boys, born with cataracts in their eyes, came under his care, the facts in respect to whom are very briefly as follows.

(1) The name of the first, who was operated upon, was William Stiff, at that time twelve years of age. This case corresponds sufficiently near to that of Cheselden. From earliest infancy he was never known to direct his hand towards any particular object with the intention of seizing it, nor were his eyes ever directed towards an object in such a way as to indicate that he perceived its form. Still, like almost all persons blind with cataracts, he could distinguish light from darkness, and the light of a fire or a candle from that of the sun, and saw gleams of lightning. On the 21st of July 1807, the cataract was removed from the left eye. The admission of light was painful. After allowing the eyelids to remain

*Stewart's Account of James Mitchell, Note near the commencement.

closed a few moments, he opened them. Mr. Home asked him what he saw ; he answered, your head, which seems to touch my eye ; but he could not tell its shape. On the 23d, he said he could see several gentlemen around him, but could not describe their figure. Other particulars are given in the Memoir referred to, but they all decidedly confirm Cheselden's narrative.

(2) On the 6th of October 1807, John Salter was couched in the left eye for the cataract. This case was much nearer Mr. Ware's than Cheselden's ; the boy could not only distinguish light from darkness, but could distinguish colours from each other with tolerable accuracy, particularly the more bright and vivid ones. When the cataract was removed, ten minutes were allowed the eye to recover itself. A round piece of card of a yellow colour, one inch in diameter was placed before him, about six inches from the eye. He said immediately it was yellow, and on being asked its shape, said, Let me touch it, and I will tell you. Being told that he must not touch it, after looking for some time, he said it was round, though it was evidently a mere conjecture on his part. A square, blue card, nearly the same size, being put before him, he said it was blue and round. A triangular piece he also called round. He was asked, whether objects seemed to touch his eye, and said, no. But when desired to say at what distance they were, he could not tell.* The next day after the operation a band of soldiers passed the hospital ; and he told Mr. Home, that he had seen the sol-

*There is a fact stated of this young man, which may perhaps throw light on the inquiry at §. 212, viz. Whether men perceive the outlines and forms of objects at once ? In the second series of experiments made two hours after the operation, he still continued to be perplexed in designating the form of the objects placed before him, and was very desirous of touching them. At last a square body was shown him, and he was requested to find the corners of the square. He examined it some time, and then readily counted them. Afterwards when a triangle was shown him, he counted the corners in the same way ; but in doing so, his eye went along the edge from corner to corner, and he named them, as he went along.

diers with their fifes and pretty things, probably mistaking the bright barrels of their muskets for musical instruments. On the fourth day after the operation, some carts and horses passed by on the road, as he was looking out at the window. He said, What is that moving? The operator asked him what he thought it was? He said, A dog drawing a wheel-barrow. There is one, two, three dogs drawing another. How very pretty!

From these two cases, (says Mr. Home,) the following conclusions may be drawn. (1) Where the eye, before the cataract is removed, has only been capable of discerning light, without being able to distinguish colours, objects after its removal will seem to touch the eye, and there will be no knowledge of their outline, which confirms the observations made by Mr. Cheselden.

(2) Where the eye has previously distinguished colours, there must also be an imperfect knowledge of distances, but not of outline, which however will afterwards be very soon acquired, as happened in Mr. Ware's cases.

CHAPTER SEVENTEENTH.

SOME ACCOUNT OF JAMES MITCHELL.

§. 287. *Circumstances of his early life.*

IN the present chapter we have an opportunity of contemplating human nature under still greater deprivations.

James Mitchell, the subject of our remarks, was born the eleventh of November, 1795. His father was the pastor of Ardclach in Scotland, a Highland parish on the banks of the Findhorn. He was both blind and deaf from his birth, and consequently incapable of speech. His intelligent mother early discovered his unfortunate situation. In early infancy she became satisfied that he was blind, from his discovering no desire to turn his eyes to the light, or to any bright object; and not long afterwards she ascertained, that he was deaf, from the circumstance that no noise, however loud, awakened him from sleep.*

Unable from his earliest infancy to hear and see, or to make known his wants by speech, he was obliged to rely almost exclusively for what knowledge he might obtain on the senses of touch, taste, and smell.

It should be remembered however, that he was not totally blind. He could distinguish day from night, and

* The facts here given are abridged from the statements of Messrs. Macfarlane, Gordon, Stewart and others, who had ample opportunities of becoming acquainted with them, and can be fully relied on.

colours from each other when they were vivid. He often held between his eye and luminous objects, such bodies as he had found, by their interposition, to increase the quantity of light ; a proof that he was not altogether without visual sensations, although the knowledge derived by him from that source was exceedingly limited.

In 1808, when he was about thirteen years of age, his father carried him to London, where an operation was performed on his left eye, but without the least advantage. In 1810 he again visited London, and was operated upon by Mr Wardrop ; but his restoration to sight, which was partially effected, was not permanent. He soon became blind as he was before, and thus continued ever afterwards, without hearing, sight, or speech.

This poor lad was certainly an object worthy of notice. The philanthropist could not fail to regard him with an interest, prompted by the feelings of benevolence ; while the philosopher had the additional motive, that the case of this unfortunate boy might be made subservient to the cause of knowledge. It is with this view, his story is introduced here ; that we may contemplate the mind under a new aspect ; that we may estimate its power, activity, and resources, when checked and burdened by the greatest possible impediments. It is not our intention therefore, to narrate the history of his life further than what has been said, but merely to state a few of the facts and incidents, resting on good authority, that are illustrative of his mental character and efforts.

§. 288. *His appearance and general traits of mind.*

He had an intelligent look. His countenance, so far from betraying indications of sottishness or fatuity, is said to have disclosed marks of the active and labouring mind within. His features assumed a different appearance under different circumstances. When he was at church, and during the time of family prayer, he was perfectly composed and sedate. When strangers were present, when he was placed in new situations, and when some new object was presented for his examination, his features became

unusually animated. He was susceptible of emotions of the ludicrous, and when any thing occurred of a nature fitted to excite them, his countenance was sometimes lighted with a smile, and sometimes convulsed with laughter. He was of an athletic form, and when offended or enraged, had a marked fierceness of aspect.

§. 289. *Of his desire of obtaining knowledge.*

The principle of curiosity, which is common in a greater or less degree to all men, existed in the unfortunate subject of our remarks, in much strength. He showed a strong desire to examine all objects. When a new body was first put into his hand, he ran it over with the points of his fingers; then applied it to his mouth, and insinuated his tongue into all its inequalities, and, when the body admitted of it, rattled it between his teeth.

Some objects attracted his attention more than others. He was pleased with smooth objects in particular. When he had gotten a piece of rough wood, he endeavoured to smooth it with his teeth, or perhaps invited any one, who might be with him, to smooth it with a knife.

Where there was mechanism, as in locks and keys, he endeavoured by handling to find it out. He was acquainted with the use of all common things, and was pleased when the use of any thing not known before was pointed out to him; but when set about doing any thing himself he discovered a want of perseverance. He took an exceeding interest in the employments of the various workmen in town, and in the progress of their work, particularly masonwork. When he had been absent a short time from the neighbourhood, on his return he examined minutely what had been done in his absence, fearlessly ascending their ladders and scaffolding.

When a ring of keys was once given him, he seized them with great avidity and tried each separately, by suspending it loosely between two of his fingers, so as to allow it to vibrate freely, and then tinkling it among his teeth. This, indeed, was one of his most favourite amusements, and it was surprizing how long it would arrest his

attention, and with what eagerness he would on all occasions renew it.—There were two reasons of this ; the one, that, although he was exceedingly deaf in the ordinary sense of the term, vibrations, communicated through the solid parts of the head, were capable of producing in him some feeble and imperfect sensations of sound. Another was, that he discovered a difference in the hardness of bodies by striking them against the teeth. There is a very distinct sensation felt towards the roots of one's teeth, when they are struck with a hard substance, resulting probably from an affection of the nerves of the membrane lining their inner cavity, and this sensation is different according to the hardness of the body. He could probably, by this kind of feeling alone, easily discover, that lead was softer than steel, and steel harder than ivory, although all these substances would feel equally hard to his proper organs of touch.

A small musical instrument, which played airs by means of a spring, was once placed between his teeth. It afforded him exquisite delight. When the notes were ended, he continued to hold the box to his mouth, and to examine it minutely with his fingers, expressing by his gestures and his countenance great curiosity.

It is a proof of his strong desire of knowledge, that he minutely explored a certain range around his father's residence, a number of hundred yards in every direction, by his organs of touch, to any part of which he walked fearlessly, and without a guide, whenever he pleased. And he gradually extended, as he had opportunity, this field of his observation.

On one of these excursions of discovery, his father observed him with horror, creeping on his hands and knees along a narrow wooden bridge, which crossed the river at a point, where the stream is deep and rapid. He was immediately arrested in his progress ; and as his father wished to discourage him from hazarding so perilous an attempt again, a servant was directed to plunge him, as soon as he was secured, once or twice into the river, which had the desired effect.

§. 290. *His applications of the sense of touch.*

As he could neither see nor hear, (at least not so much as to enable him effectually to avail himself of those senses in the acquisition and communication of knowledge,) he was obliged to rely chiefly on the Touch. It is true, that his sense of smell became exceedingly acute. He made use of this sense, as well as of touch, in distinguishing any small article, which was appropriated to himself, from what belonged to others. But he evidently placed his chief reliance on his tactual sensations. Whenever a stranger arrived, his smell was acute enough to inform him of the circumstance, and to direct him to the place, where the stranger might be; but he then proceeded to survey the visitant by the sense of touch.

As he resided in a remote situation, male visitants were most frequent; and therefore the first thing he generally did was to examine, whether or not the stranger wore boots. If he found that to be the case, he would immediately leave him, go to the lobby, feel for, and accurately examine his whip; then proceed to the stable, and examine his horse with great care, and with the utmost warming attention.

It sometimes happened, that visitants arrived in a carriage, and he never failed, on such occasions, to go to the place, where the carriage stood, and carefully and repeatedly examine its structure, particularly the springs. He was undoubtedly greatest in those things by the sense of smell in part, but chiefly by the touch.

He sometimes wandered a number of miles from home proceeding without a guide. But a dog was accustomed to follow him, and keep him constantly in view, so he was necessarily exposed to much danger in those excursions. On the road near his residence he was met a person riding on a horse, which had been taught to stop before from his mother; and on coming up to him, and feeling it, he appeared instantly to be surprised; the person immediately dismounted, and stood before him, and behave; and he was assured in fact, that he was not a

to his mother's stable, took off his saddle and bridle, put corn before him, and then withdrew, locking the door, and putting the key in his pocket.

The sense of touch seems to have been to him a source of much pleasure, as well as of instruction. He often employed himself many hours, in selecting from the bed of a neighbouring river, stones of a round shape and nearly of the same weight, and having a certain degree of smoothness. These he would place in a circular form on the bank, and then seat himself in the middle of the circle.

§. 291. *Manner of making known his wants, &c.*

He was aware of the fact, in whatever way he may have ascertained it, that the powers of vision, enjoyed by others, were greater than his own. This is evident from the circumstance, that of the natural signs he employed, most of them were addressed to the sight of those whom he conversed with. For instance, to indicate a distant place, his custom was to stretch out his arm at full length. That was his sign in particular for the city of London, which he had visited. When he would express, that he had been on horseback, he raised his foot, and brought the fingers of each hand together under the sole, in imitation of a stirrup. He placed his hand on his mouth to signify his wish for food; and when he desired to go to bed, he inclined his head sideways, as if to lay it on a pillow. He formed an intimate acquaintance with the shoemakers in the neighbourhood; and he indicated to the family his intention of visiting them by imitating, as he moved forward towards the door, the shoemaker's motion with his arms when he pulls the thread.

On the other hand, the signs, which were employed by others to convey information to him, were addressed to his organs of touch. When his sister, who had the special charge of him, desired to signify her *highest approbation*, she patted him much and cordially on the head, or back, or hand. This expression, more sparingly and less warmly bestowed, signified *simple assent*; and she had only to refuse him these signs of her approbation entirely,

and to repel him gently, to convey to him in the most effectual manner the notion of her *displeasure*. He himself expressed his own satisfaction and complacency, by patting the person or object, which excited that feeling.

§. 292. *His memory and feelings of sympathy.*

He had a strong memory. An instance may be given, which will illustrate his character in other respects, particularly his benevolence. He once received a severe wound in his foot, and during its cure, he usually sat by the fireside with his foot resting on a small footstool. More than a year afterwards, a servant boy, with whom he used to play, was obliged to confine himself to a chair from a similar cause. Young Mitchell, perceiving that his companion remained longer in one situation than he used to do, examined him attentively, and seemed quickly to discover, by the bandages on his foot, the reason of his confinement. He immediately walked up stairs to a garret, sought out, amidst several other pieces of furniture, the little footstool, which had formerly supported his own wounded limb, brought it down in his hand to the kitchen, and gently placed the servant boy's foot upon it.

A pair of shoes was once brought to him, and on putting them on, he found them too small. His mother then took them, and put them into a small closet; soon after a thought seemed to strike him, and he contrived to obtain the key of the closet, opened the door, took the shoes, and put them upon the feet of the young lad, who attended him, whom they suited exactly.—He discovered a fondness for young children, and would take them up in his arms.

He exhibited much uneasiness, when separated from his friends. When his father died, he was in sorrow; and discovering shortly after his father's death, that his mother was unwell, he was observed to weep. On a subsequent occasion, when his mother was from home, he betrayed much anxiety. His sister allayed the desire he showed for her return, by laying his head gently down on a pillow, once for each night his mother was still to be

away, implying that he would sleep so many times before her return. After his mother's death, his attachment to his sister, on whom he very much depended, increased. For a time he was unwilling to quit her for an instant, and when she happened to be absent for a short time, he would go through the whole house in quest of her. Every act of kindness done by her seemed to be attended with a double pleasure to him ; so much so that he would sometimes wait half an hour for her assistance, rather than be aided by any body else.

§. 293. *Of his sense of the ludicrous.*

He was susceptible, as has already been remarked, of emotions of the ludicrous. He was once seen to amuse himself with a dead fowl ; placing it repeatedly on its legs, and laughing when it fell.—He was in the habit of smoking. A gentleman once came to Ardclach on a visit, who was in the same habit, and having tobacco, wished for a pipe. His sister gave James a half-penny, and permitted him to smell the tobacco. He understood her signs ; and went out to a shoemaker's house in the neighbourhood, where pipes were to be had, and returned with one only in his hand. His sister suspected, that he had another about him, and giving him to understand as much, he at last unbuttoned his waistcoat, and laughing heartily, brought out the second pipe.—The sunday after this occurrence, when his sister gave him a half-penny as usual in church, to put into the poor's box, he immediately placed the half-penny between his teeth, like a pipe, and laughed, but she checked him, and he dropped it into the box.

The trick of locking people into the house or stable afforded him much amusement. He once succeeded in locking up the patron of the parish, a particular friend of the family, and kept him prisoner a number of minutes, laughing and jumping about all the while. He was fond of persons, who were well-dressed ; disliked exceedingly to wear old clothes himself, and was highly gratified, whenever he got a new suit.

§. 294. Of his moral and devotional feelings, and his ideas of death.

He discovered a moral sense, a perception of right and wrong. Had it not been so, he would not have been such a favourite in the neighbourhood as he was. The neighbouring families allowed him to enter their houses, and handle whatever he had a mind to. He never attempted to carry any thing away with him, or to injure it while in his possession.

When he had done wrong, if gentle means were applied to make him sensible of it, he exhibited sorrow ; but if harshly treated, he was irritated. He was subject to anger also upon being crossed in any of his desires, and when he found his clothes or other articles unexpectedly removed from his chest. There is no satisfactory evidence, that he had a notion of a Supreme Being, or that he was susceptible of devotional feelings, except it can be inferred from the circumstance, that he would sit quietly in church, and kneel with the rest of the family at family prayers. It was perhaps owing to certain affecting reminiscences, that, three months after his father's death, a clergyman being in the house on a sunday evening, he pointed to his father's Bible, and then made a sign, that the family should kneel. Deaf and dumb persons generally have no idea of a God, till it is taught them ; but Mitchell was blind, as well as deaf and dumb ; and therefore it is the less probable, that he should have any notion of a God and of accountability to him. The statement in respect to the Deaf and Dumb, which has just been made, may perhaps appear strange to those, who recollect the prevalence of the opinion anciently, that the notion of a Supreme Being is innate in the human mind, and exists there naturally and universally. Facts, however, seem abundantly to confirm it. It is well known, that, in the American Asylum at Hartford, particular attention has ever been paid to the moral and religious state of the pupils. In the fourteenth Report of the Directors, they state explicitly to the public, "that all the experience of

the Asylum serves to establish the fact, that, without instruction, the Deaf and Dumb are never led, by the consciousness of their own intellectual operations, or by the contemplation of the works of nature, to even a glimpse of the immortality of the soul, the existence of God, or of their accountability to him."

What idea he had of death, does not distinctly appear. He probably associated with it the notion of departure or absence, as he knew but too well, that his father and mother came not back again from the grave. He once came near being drowned and afterwards, when he was taken sick, he was apparently afraid of dying. That he indulged certain mysterious fears at that time is the more probable from this circumstance. After his father's death, he was put into the same bed where his father had died. He would not lie a moment in it, but became quite peaceable, when removed to another.

§. 295. *His conduct at his father's death.*

He discovered grief at his father's death. When the coffin was brought from the house, and placed upon chairs in the court before the house, he approached the coffin, smelled it eagerly for several seconds ; then laid himself down upon the lid on his face, and embraced the coffin, while his countenance discovered marks of sorrow. When the coffin was about to be lifted in order to be carried to the church-yard, he clung to it, endeavouring to prevent its being carried away, and was obliged to be removed by force. At this time however another strong feeling agitated him, that of curiosity ; a great number of people were assembled together, and he was seen passing rapidly among the crowd, touching almost every one, and examining some very minutely. The feelings of grief, curiosity, and astonishment seem to have been mingled together with great power, successively gaining the ascendancy, leading him at one time to the coffin, at another among the crowd. On the morning after his father's burial, and for several mornings afterwards, he is said to have visited his father's grave, patted gently the turf which had been

laid over it, and at last, as if hopeless of his return, to have shed tears of regret. When a tailor was brought to make a suit of mournings for him, he took him into the apartment where his father had died, stretched his own head and neck backwards, pointed to the bed, and then conducted him to the church-yard, to the grave in which his father had been interred.

§. 296. *Connection of the foregoing facts with principles in mental philosophy.*

These details, imperfect as they are, may be made instructive. Every one, who has the ordinary feelings of man, must be supposed to assent with readiness to the saying of the Roman poet, (*nil humani a me alienum puto*,) that human nature in all its forms is interesting. But in this instance, there is more than this ; it not only excites our sympathy and interest, but gives us positive and definite knowledge.

I.—The facts, which have been stated, go to confirm the general views already expressed on the subject of the Origin of Knowledge, viz, That, during the early periods of life, the connection of the mind with the material world is particularly close, and that far the greater part of its acts and feelings can be traced to that source. Although the young man, whose case we have considered, was deprived of the senses of sight and hearing, he became possessed of no small amount of information, attributable to such senses as remained to him. His smell, taste, and feeling were active, and enabled him to keep up an intercourse with the external world. But his knowledge did not, as a general statement, go beyond ; it was limited almost wholly to matter; and what is more, to matter, as it was very imperfectly represented by those three senses alone.

Had this communication with the material world been more perfect, the mind would at last have obeyed the dictates of its nature, unlocked what may be termed the interior storehouse, and have lavished forth such treasures, as are not represented by any thing on earth. There would have arisen other thoughts, conceptions of the

loveliness of truth and wisdom, notions of creative power, relations, and dependencies. There would have been a vast accession to what was previously obtained. Reason would have deduced new conclusions; imagination would have reared fairer fabrics; the sublime notions of God, of moral obligation, and of religious faith would have shone out, like stars in the darkness of midnight, and discovered a new world in the soul. Visions of glory, aspirations after better and holier things would have burst upon the mind, and gleamed on the countenance. But it was not so; nor have we reason to suppose, that it will ever be so, under precisely the same circumstances.

II,—Again, we have a confirmation of the principle, which has been formerly laid down, that a loss of one or more of the senses will be attended with an increased activity and power of such as remain. This increase was certainly very great in the case before us; and the statement will probably be found to hold universally. And it is a remark naturally connected with this, that this is a provision exceedingly kind and benevolent. Providence opens hidden fountains of power, and discovers unexpected sources of comfort, in situations the most distressing and desolate. It is distinctly said of James Mitchell, although he was not ignorant of his bodily imperfections compared with others, that he did not discover any uneasy feeling at his situation. Such an increase of activity and strength was given to the powers he possessed, as to secure a considerable portion of happiness amid his apparent wretchedness. The gaiety of the blind had been often noticed before, but it was deemed almost impossible, that one both blind, and deaf, and speechless should be so happy.

III,—The sketches, which have been presented, illustrate and confirm the doctrine, that curiosity or the desire of knowledge is natural to man, is a propensity, implanted by nature. No man lives, who is in the full and orderly possession of his powers, without being animated, in a greater or less degree, with the desire to know. This desire is sometimes repressed by outward circumstances, especially

the difficulties attendant on acquiring knowledge; but is not entirely extinguished. In the case of Mitchell the love of knowledge existed under the most discouraging and distressing circumstances; but it was nevertheless very marked, and almost uncontrollable. We find him exploring the ground inch by inch; we see him creeping on his hands and knees, on bridges and the tops of houses; examining not only men, but dogs, horses, carriages, furniture, musical instruments, &c; standing by the side of shoemakers, tailors, and bricklayers, and intently curious to know the mode and the result of their labours. Inspired by the desire of extending his acquaintance with things, he would rush forth, (blind and deaf and dumb as he was,) and rapidly travel miles in the neighbouring country; so that it was necessary to employ a lad to follow him, that he might be kept from the numerous dangers, to which he was exposed in these excursions.

“Solitary as Mitchell is, (says Dugald Stewart,) in the midst of society, and confined in his intercourse with the material world within the narrowest conceivable limits, what a contrast does he exhibit to the most sagacious of the lower animals, though surrounded with all the arts of civilized man, and in the fullest possession of all the powers of external perception. Even in his childish occupations and pastimes, we may discern the rudiments of a rational and improvable nature; more particularly in that stock of knowledge, scanty as it is, which he has been led to acquire by the impulse of his own spontaneous and eager curiosity.”

IV,—We will not pursue the train of interesting reflections which naturally connect themselves with the facts, which have been stated. A single remark further shall suffice. We find, in the case of Mitchell, a confirmation of the position, that man is a social being; in other words, that he naturally desires the company of others, and is exceedingly unhappy, when wholly deprived of it. The principle is an universal one, but it of course shows itself most strongly in respect to those of one's own family.

He loved those, whom he saw not, heard not ; human nature had a charm for him, though clothed in silence and darkness ; in sickness, suffering, and want he knew where to go ; his mind imaged forth lovely objects, his father, his mother, his sister ; and his touch guided him to their presence. He, whom the world pronounced the most miserable of beings, found sources of pleasure not only in himself, but in others. He loved much ; for daily he groped his way in darkness to his father's grave, and the tears were on his cheek. His heart was drawn out, although undoubtedly in a less degree than towards those who were particularly connected with him, towards all human beings ; and whatever had the form of man attracted his regards and interest. What a commentary is this on the strange doctrine of Hobbes, who represents men as naturally at war with each other, and as being bound by no natural ties of sympathy and friendship !

PART SECOND.

INTELLECTUAL STATES OF THE MIND.



CLASS SECOND.

INTELLECTUAL STATES OF INTERNAL ORIGIN.



1000

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CHAPTER FIRST.

INTERNAL ORIGIN OF KNOWLEDGE.

§. 297. *The soul has fountains of knowledge within.*

WE have traced the history of the mind thus far with continued and increased satisfaction, because we have been guided solely by well authenticated facts, without the least desire of exciting wonder by exaggeration, and with no other feeling than that of knowing the truth. With cautious endeavours not to trespass upon those limits, which the Creator himself has set to our inquiries, we have seen the mind placed in the position of a necessary connection with the material world through the medium of the senses, and in this way awakened into life, activity, and power. Dumb matter seems to have been designed and appointed by Providence as the handmaid and nurse of the mind in the days of its infancy ; and for that purpose to have been endued with form, and fragrance, and colour the most various and delightful. Material eyes were given to the soul, that it might see ; and material hands, that it might handle ; and hearing, that it might hear ; but the time shall come, when these outward and bodily helps shall be taken away, and it will see, as it were, face to face, and not as in a glass darkly. Even before the body is put off, and the senses are entirely closed up, the spiritual eye begins to open, and the spiritual touch to

feel ; in other words, the soul finds knowledge in itself, which neither sight, nor touch, nor hearing, nor any other sense, nor any outward forms of matter could give. However interesting and fruitful may have been the train of investigation, which has already been before us, it is to be remembered, that we have hitherto seen the mind unfolding its susceptibilities only in connection with external impressions on the senses. A new view is to be taken of it.

The natural progress of all true learning, (says the author of *Hermes*,) is from sense to intellect." Beginning with the senses, and first considering the sensations and ideas which we there receive, we are next to enter more exclusively into the mind itself, and shall there discover a new and prolific source of knowledge. And in thus doing, it is a satisfaction to know, that we are treading essentially in the steps of Mr. Locke, whose general doctrine undoubtedly is, that a part of our ideas only may be traced to the senses, and that the origin of others is to be sought wholly in the intellect itself.

§. 298. *Declaration of Mr. Locke, that the soul has knowledge in itself.*

After alluding to the senses as one great source of knowledge, "the other fountain, (says Locke,) from which experience furnisheth the understanding with ideas, is the perception of the operations of our own minds within us, as it is employed about the ideas it has got ; which operations, when the soul comes to reflect on and consider, do furnish the understanding with another set of ideas, which could not be had from things without, and such are perception, thinking, doubting, believing, reasoning, knowing, willing, and all the different actings of our own minds, which, we being conscious of, and observing in ourselves, do from these receive into our understandings ideas as distinct, as we do from bodies affecting our senses. This source of ideas every man has wholly in himself. And though it be not sense, as having nothing to do with EXTERNAL objects, yet it is very like it, and might properly

enough be called INTERNAL SENSE. But as I call the other sensation, so I call this Reflection ; the ideas it affords being such only as the mind gets by reflecting on its own operations within itself."

It is perhaps necessary to remark here, that we introduce this passage from Mr. Locke, merely in support of the general doctrine, without wishing to intimate a full approbation of the manner, in which he has applied it in its details. What we say now concerns the general question ; and in reference to that question, the passage just referred to is undoubtedly weighty in itself, as well as in consequence of the great fame and acknowledged discernment of its author. It would seem to be the doctrine of Mr. Locke, that our knowledge begins with sensation ; that impressions, made on the bodily system, are the first occasions of bringing the mind into action, so far as we can judge. Nor is it necessary to make any objection to this view ; it is very reasonable, and pains have already been taken to show, that it is clearly worthy of the utmost regard. But it does not follow from this, (and the passage just quoted shows, that Mr. Locke did not suppose it thus to follow,) that sensation is the only source of knowledge. There is undeniably something distinct from sensation ; thoughts, which have an interior origin, and cannot be represented by any thing external ; principles, so far from being directly dependent on sensation, that they control, compare, appreciate, judge of it.

§. 299. *Opinions of Dr. Cudworth on the general subject of internal knowledge.*

We may properly introduce here a quotation or two from another great authority, nearly contemporaneous with Mr. Locke, that of Dr. Cudworth, a name which is acknowledged to rank deservedly high among those, which are most closely associated with exalted wisdom and virtue. Let us however be again reminded, that our whole object here is to establish the general position, that there is knowledge of a purely internal, as well as of an external origin ; and that, therefore, a reference to writers for

that purpose does not necessarily involve an approbation of, or a responsibility for their opinions any farther than they relate to the particular object in view.—The posthumous work, from which these extracts are made, is understood to have been written in reply to Mr. Hobbes, who held the opinion, that all our thoughts of whatever kind are only either direct, or transformed and modified sensations. And therefore, the statements made in it, being called forth under such circumstances, must be supposed to have been carefully meditated, and on that ground, among others, are entitled to much weight.

“That oftentimes, says Cudworth,* there is more taken notice of and perceived by the mind, both in the sensible objects themselves, and by occasion of them, than was impressed from them, or passively received by sense; which therefore must needs proceed from some inward active principle in that which perceives, I shall make it further appear by some other instances.

“For, first, let a brute and a man at the same time be made spectators of one and the same artificial statue, picture, or landskip; here the brute will passively receive all that is impressed from the outward object upon sense by local motion, as well as the man, all the several colours and figures of it; and yet the man will presently perceive something in this statue or picture, which the brute takes no notice of at all, viz. beauty, and pulchritude, and symmetry, besides the liveliness of the effigies and pourtraiture. The eye of the brute being every jot as good a glass or mirror, and perhaps endued with a more perspicacious sense or power of passive perception, than that of a man.

“Or again, let both a man and a brute at the same time hear the same musical airs, the brute will only be sensible of noise and sounds; but the man will also perceive harmony in them, and be very much delighted with it; nay, even enthusiastically transported by it. Wherefore the brute perceiving all the sounds, as well as the man, but

* Immutability of Morality, Book IV, Chap. II. §. 14.

nothing of the harmony. the difference must needs arise from some inward active principle or anticipation in the man, which the brute hath not."

§. 300. *Further remarks of the same writer on this subject.*

"But I shall yet further illustrate this business. says this eloquent writer near the conclusion of the same chapter,) that the mind may actively comprehend more in the outward objects of sense, and by occasion of them, than is passively received and impressed from them, by another instance. Suppose a learned written or printed volume held before the eye of a brute-creature or illiterate person ; either of them will passively receive all that is impressed upon sense from those delineations ; to whom there will be nothing but several scrawls or lines of ink drawn upon white paper. But if a man, that hath inward anticipations of learning in him, look upon them, he will immediately have another comprehension of them than that of sense, and a strange scene of thoughts presently represented to his mind from them ; he will see heaven, earth, sun, moon and stars, comets, meteors, elements, in those inky delineations ; he will read profound theorems of philosophy, geometry, astronomy in them, learn a great deal of new knowledge from them that he never understood before, and thereby justly admire the wisdom of the composer of them. Not that all this was passively stamped upon his soul by sense from those characters ; (for sense, as I said before, can perceive nothing here but inky scrawls, and the intelligent reader will many times correct his copy, finding *erratas* in it ;) but because his mind was before furnished with certain inward anticipations, that such characters signify the elements of certain sounds, those sounds, certain notions or cogitations of the mind ; and because he hath an active power of exciting any such cogitations within himself, he reads in those sensible delineations, the passive stamps or prints of another man's wisdom or knowledge upon them, and also learns knowledge and instruction from them, not as infused into his mind from those sensible characters, but by

reason of those hints and significations thereby proposed to it, accidentally kindled, awakened and excited in it: for all, but the phantasms of black inky strokes and figures, arises from the inward activity of his own mind. Wherefore this instance in itself shews, how the activity of the mind may comprehend more in and from sensible objects, than is passively imprinted by them upon sense.

“ But now, in the room of this artificial book in volumes, let us substitute the book of nature, the whole visible and material universe, printed all over with the passive characters and impressions of divine wisdom and goodness, but legible only to an intellectual eye; for to the sense both of man and brute, there appears nothing else in it but as in the other, so many inky scrawls, *i. e.* nothing but figures and colours; but the mind and intellect, which hath an inward and active participation of the same divine wisdom that made it; and being printed all over with the same archetypal seal, upon occasion of those sensible delineations represented to it, and taking notice of whatsoever is cognate to it, exerting its own inward activity from thence, will not have only a wonderful scene and large prospect of other thoughts laid open before it, and variety of knowledge, logical, mathematical, metaphysical, moral displayed; but also clearly read the divine wisdom and goodness, in every page of this great volume, as it were written in large and legible characters.”*

* Many other writers, as Stewart, Degerando, Brown, and Cousin advocate this general doctrine. Kant himself, whatever obscurity may rest on other articles of his metaphysics, is clear upon this. He evidently gives us to understand, that the mental operations themselves, although the senses are the first occasions of those operations, furnish a new set of notions, which cannot directly be traced to any thing external.—*Der Zeit nach geht also keine Erkenntniss in uns vor der Erfahrung vorher, und mit dieser fangt alle an. Wenn aber gleich alle unsere Erkenntniss mit der Erfahrung anhebt, so entspringt sie darum doch nicht eben alle aus der Erfahrung. Denn es könne wohl seyn, dass selbst unsere Erfahrungserkenntniss ein Zusammengesetztes aus dem sey, was wir durch Eindrücke empfangen, und dem, was unser eigenes Erkenntnissvermögen, (durch sinnliche Eindrücke bloss veranlasst,) aus sich selbst hergiebt, welchen Zusatz wir von jenem*

§. 301. *Writers who have objected to the doctrine of an internal source of knowledge.*

But it ought not to pass unnoticed, that there have been writers, who have objected to the doctrine of an internal source of knowledge in distinction from that knowledge, which is outward, and is dependent, not only for its occasion, but for its very nature, on the senses. It was the opinion, among others, of Mr. Hobbes, who preceded Locke, and was not without merit as a metaphysician, that all our knowledge might be traced to the senses, and that of course no other origin of it need be sought. "The original of all thoughts, says that writer, is that, which we call **SENSE**. There is no conception in a man's mind, which hath not at first, totally, or by parts, been begotten upon the organs of sense."* This was the opinion also of his contemporary, Gassendi, who was his particular friend and correspondent; and at a still later period, of Condillac. The latter supported his views at length, and with much ingenuity, particularly in his *Treatise on Sensations*.

These writers appear to have maintained, as a general statement, that we have no simple ideas, but such as exist in the mind directly by means of the senses. As they further maintained, that those of a complex nature are made up of such as are simple, they consequently considered them in the light of combined and transformed sensations. Such appears to be the general outline of their doctrine, although it has its obscurities and perplexities, as might be expected in consequence of being essentially ill-founded.—"If we consider (says Condillac) that to remember, to compare, to judge, to distinguish, to imagine, to be astonished, to have abstract ideas,

Grundstoffe nicht eher unterscheiden, als bis lange Uebung uns darauf aufmerksam, und zur Absonderung desselben geschickt gemacht hat. *Kant's Kritik der reinen Vernunft, Einleitung, I.*

* Hobbes' *Leviathan*, Chap. I.

to have ideas of number and duration, to know truths, whether general or particular, are but so many modes of being attentive ; that to have passions, to love, to hate, to hope, to fear, to will, are but so many different modes of desire ; and that *attention*, in the one case, and *desire*, in the other case, of which all these feelings are modes, are themselves, in their origin, nothing more than modes of sensation, we cannot but conclude that SENSATION involves in itself all the faculties of the soul.”*

This sentence in its evident meaning, and as it is understood both by its author and his commentators, is clearly at variance with the doctrine of Locke, and entirely cuts off what has been variously termed the internal, reflex, or subjective source of our knowledge. According to this doctrine every thing may be traced back to the senses, not merely as its occasion, but as its direct or at least its essential cause ; every thing becomes material ; we are utterly unable to form a conception even of the glorious Deity himself, except under such an appearance, as the imagination, dealing with sensible images alone, can picture forth from the gross and limited materials of earth. And in the same way every other idea, however spiritual and whatever it may relate to, must be capable of being followed back to some archetype in outward, material existences. The mind may separate and modify, and combine sensible ideas or images, but can never get above them ; there is a portion of earthliness in every possible thought.

It must, therefore, be obvious, that the tendency of this system is to degrade the mind ; not only to limit the range, but to depress the character of its powers. The propriety of receiving it, however, does not depend so much upon its tendency, as upon the direct evidence, which may be brought in its support, in which it is found to be utterly deficient.

* *Traité des Sensations*, Pt. I. CH. 7. §. 2.

§. 302. *Knowledge begins in the senses, but has internal accessions.*

In order to have a clear understanding of the particular topic before us, let us briefly advert to certain general views already more or less attended to, having a connection with it. In making the human soul a subject of inquiry, it is an obvious consideration, that a distinction may be drawn between the soul, contemplated in itself, and its acts, or states, or the knowledge which it possesses. The inquiry, therefore, naturally arises, Under what circumstances the acquisition of knowledge begins?

Now this is the very question, which has already been considered; nor can it be deemed necessary to repeat here the considerations, which have been brought up in reference to it. It is enough to express our continued reliance on the general experience and testimony of mankind, so far as it is possible to ascertain them on a subject of so much difficulty, that the beginnings of thought and feeling and knowledge are immediately subsequent to certain affections of those bodily organs, which we call the **SENSES**. In other words, were it not for impressions on the senses, which may be traced to objects external to them, our mental capabilities, whatever they may be, would have remained folded up in all probability, and have never been redeemed from a state of fruitless inaction.

Hence the process, which is implied in the perception of external things, or what is commonly termed by Mr. Locke *sensation*, may justly be considered the occasion or the introductory step to all our knowledge. But it does not follow from this, nor is it by any means true that the whole amount of it in its ultimate progress is so much directed directly to the same source. All that can be said with truth, is, that the mind receives the earliest part of its ideas by means of the senses, and that in consequence of having received these elementary thoughts, all its powers become rapidly and fully operative.

And here we come to the various progress of knowledge. The powers of the mind being now fully

brought into exercise, its various operations then furnish us with another set of notions, which, by way of distinguishing them from those received through the direct mediation of the senses, may be called, in the language of Mr. Locke, ideas of reflection, or, to use a phraseology embracing all possible cases, ideas of INTERNAL ORIGIN.

These two sources of human thought, the Internal and External, however they may have been confounded by the writers last alluded to, are entirely distinct. The ideas, which arise in the mind, solely from the fact of the previous existence of certain mental operations, could not have been suggested by any thing, which takes place in the external world, independently of those operations. Of this last class, some instances, with illustrations of the same, may properly be mentioned here.

§. 303. *Instances of notions, which have an internal origin.*

Among other notions, which are to be ascribed to the second great source, are those, expressed by the terms, thinking, doubting, believing, and certainty.—It is a matter of internal observation, (that is, of consciousness or of reflection, which are synonymous with internal observation,) that the mind does not, and cannot for any length of time remain inactive. Hence there is occasion given for the origin of that idea, which we denominate THINKING. The notion, which we thus call, is framed by the mind under these circumstances ; the name is given, and nobody is ignorant as to what is meant. But then it is to be marked that its origin is wholly internal ; it is not an object of touch, or taste, or sight ; it is to be ascribed to the mind itself alone and to its inherent activity, unaided by the senses, or by any thing operating upon them.

Again, in the examination of some topic, which is proposed for discussion, a proposition is stated with little or no evidence attending it, and the mind, in reference to that proposition, is brought into a position, to which we give the name of *doubting*. It is by no means easy, or rather it is impossible, to trace this idea directly to the senses. All we can say of it, is, that it has its origin within, and

necessarily exists immediately subsequent to certain other mental states, of which we are conscious.

But then in this very instance, if the evidence be considerably increased, the mental estimation, which we form, is altered in regard to it, and to this new state of the mind we give the name of *belief* or *believing*. And in case the evidence of the proposition is of a higher and more decided character, there then arises another state of the mind, which we denominate *certainty*.

The ideas of virtue and vice, of justice and injustice, of order, proportion, similitude, truth, wisdom, obligation, succession, cause, effect, and many others, have a like origin; at least there are none of them to be ascribed directly and exclusively to the senses.—It is cheerfully granted, that, in determining this point, it is proper to refer to the common experience of mankind, and to rely upon it. But it is believed in all these instances, (certainly in the most of them,) such a reference will be amply decisive.

Let it then be left to the candid internal examination of each individual, to determine, Whether a distinction be not rightly drawn between the origin of these ideas, and that of those, which we attribute to the senses, such as red, blue, sweet, fragrant, bitter, hard, extended, &c. ? On this question, it is thought, that in general there can be but one answer, although some minds of superior order have from time to time been betrayed into error on this subject through the love of excessive simplification.

Hence it is distinctly to be kept in mind, that there are two sources of thought and knowledge. An affection of the senses by means of external objects is the immediate occasion of one portion; the constitution of the mind and its operations are the occasions or source of the other. Those notions, which can be ascribed directly to any one of the senses as their specific source, and not merely as an indirect and general occasion of their origin, are *External*, while all others seem to be entitled to be called *Internal*. And yet, it will be recollected, that we have found it necessary to treat of some notions under the general head of *External Knowledge*, not precisely corresponding

to the view now given. The mental states, which we now have reference to, were found, however, to be so closely connected, in their origin, with the exercise of the senses, or with some other affection of the bodily system, (such as the idea of externality, the uneasy feeling of hunger, thirst, &c.) as to come under consideration somewhat more naturally there, than in any subsequent part of our inquiries.

§. 304. Of the imperfections attendant on classifications in mental philosophy.

The remarks just made naturally lead us to embrace this opportunity to suggest a caution, applicable to the subject of Classification in mental philosophy in general. It will be recollected, that the first arrangement of the states of the mind was into the two great divisions of Intellectual and Sentient. Beginning with the intellectual part of our nature, we found our intellections susceptible of being divided into those of an External, and those of an Internal origin ; and have hitherto directed our inquiries with a reference to this division, &c. Now the caution we would suggest is, that the general classification just referred to, and all other general classifications in mental philosophy are to be regarded as approximations to the truth, rather than as the truth itself. If they are not imperfect and unsatisfactory in themselves, which is likely enough to be the case, they will always be found to be so, in some respects, in their application. As the mind begins to operate in all its parts, and in all its relations, nearly simultaneously, (and certainly at a very early period of life,) the history of its multiplied acts and feelings becomes very much interwoven and perplexed. In the matter of Classification therefore, nothing more is to be expected than a general outline, approximating as nearly as possible to an expression of what is conceived to be the truth ; our inquiries are to be directed by such general outline so far as can be done consistently with the often involved and complicated nature of the mental operations ; but after all, the value of our

investigations will depend essentially and chiefly on the accuracy of the details.

We make these remarks here because some, who assent to the general arrangement, may perhaps imagine, that they see reason for an alteration in the disposition of the subordinate parts. And we readily admit, that cases are to be found, where it is somewhat difficult to determine, under what general head particular thoughts are to be placed, and particular mental exercises and associations are to be arranged. But if, as before intimated, the outlines of the system be generally correct or nearly so, and the details, although they may sometimes be wrongly placed relatively to such outlines, be given with accuracy, not much will be found, which there will be occasion to object to.

NOTE. Consult, in reference to this chapter, Stewart's Philosophical Essays, Pt. I. Historical Dissertation of the Same, Pt. II. §. 1. Price's Review of Questions in Morals, CH. I. §. 2, 3. Locke's Essay, Bks, I. II. Brown's Lectures on the Philosophy of the Mind, Lects. vii. xxxiii. Hutcheson's Introduction to Moral Philosophy, Bk. I CH. i. § 3, 4. Hobb's Leviathan, Pt. I. CH. I. Cudworth's Intellectual System, Bk. I. CH. 4. Harris' Hermes, Bk. III. CH. 4. An Anonymous Work, entitled Essays on the Principles of Morality and Natural Religion, Pt. II. Essay, 4. (2d ed. Lond. 1758.) Cousin's Histoire de la Philosophie du XVIII Siecle, &c.

CHAPTER SECOND.

SUGGESTION.

§. 305. *Import of the term suggestion and its application in Reid and Stewart.*

SOME of the cases of thought and knowledge, which the mind becomes possessed of in itself, without the direct aid of the senses, are to be ascribed to Suggestion. This word, in its application here, is used merely to express a simple, but important fact, viz, That the mind, by its own activity and vigour, gives rise to certain thoughts. Without any mixture of hypothesis, or any qualifying intimation whatever, it gives the fact, and that is all. The use of this word, as applicable to the origin of a portion of human knowledge, is distinctly proposed by Dr. Reid. In his Inquiry into the Human Mind, (CHAP. II, §. 7,) he speaks of certain notions, (for instance, those of existence, mind, person, &c,) as the “judgments of nature, judgments not got by comparing ideas, and perceiving agreements and disagreements, but immediately inspired by our constitution.” Pursuing this train of thought, he further remarks; “It is incumbent on those, who think that these are not natural principles, [that is, notions called forth within us, independently of reasoning,] to show, how we can otherwise get the notion of mind, and its faculties. Again, immediately after, he ascribes those notions, which cannot be attributed directly to the senses

on the one hand, nor to the reasoning power on the other, to an internal or mental suggestion, as follows.—“I beg leave to make use of the word SUGGESTION, because I know not one more proper, to express a power of the mind, which seems entirely to have escaped the notice of philosophers, and to which we owe many of our simple notions which are neither impressions nor ideas, as well as many original principles of belief. I shall endeavour to illustrate, by an example, what I understand by this word. We all know, that a certain kind of sound suggests immediately to the mind, a coach passing in the street; and not only produces the imagination, but the belief, that a coach is passing. Yet there is here no comparing of ideas, no perception of agreements or disagreements, to produce this belief: nor is there the least similitude between the sound we hear, and the coach we imagine and believe to be passing.

“It is true that this suggestion is not natural and original; it is the result of experience and habit. But I think it appears, from what hath been said, that there are natural suggestions; particularly, that sensation suggests the notion of present existence, and the belief that what we perceive or feel, does now exist; that memory suggests the notion of past existence, and the belief that what we remember did exist in time past; and that our sensations and thoughts do also suggest the notion of a mind, and the belief of its existence, and of its relation to our thoughts. By a like natural principle it is, that a beginning of existence, or any change in nature, suggests to us the notion of a cause, and compels our belief of its existence. And in like manner, as shall be shown when we come to the sense of touch, certain sensations of touch, by the constitution of our nature, suggest to us extension, solidity, and motion, which are nowise like to sensations, although they have hitherto been confounded with them.”——We find similar sentiments of this learned and cautious writer in various other places.

Mr. Stewart also, in his Philosophical Essays, speaks of certain mental phenomena, as attendant upon the ob-

jects of our consciousness, and as **SUGGESTED** by them. The notions of time, number, motion, memory, sameness, personal identity, present existence, &c. he ascribes neither to the external world on the one hand, nor to the internal mental operations, of which we are conscious on the other; except so far as they are the occasions, on which the mind brings them out, or **SUGGESTS** them from its own inherent energy. Of the notion of **DURATION** for instance, he would say, I do not see it, nor hear it, nor feel it, nor become acquainted with it by means of any other of the senses; nor am I conscious of it, as I am of believing, reasoning, imagining, &c. but it is **SUGGESTED** by the mind itself; it is an intimation absolutely essential to the mind's nature and action.

It will be noticed that Dr. Reid has not limited the use of the word suggestion, exclusively to those cases, which are purely internal. Nor was this necessary. Those cases however, where suggestion is brought into exercise by occasions chiefly external, (as, for instance, in forming the notion of outness or externality,) are few in number, and naturally and almost necessarily come up for consideration in treating of the separate senses. As a general statement, the occasions of its exercise are either wholly of an interior nature, or with only a slight mixture of outward circumstances.

§. 306. *Ideas of existence, mind, self-existence, and personal identity.*

We shall now mention a few ideas, which have this origin, without undertaking to give a complete enumeration of them.

I,—EXISTENCE. Among the various notions, the origin of which naturally requires to be considered under the head of Suggestion, is that of existence. What existence is in itself, (that is to say, independently of any existent being,) it would be useless to inquire. Using the word as expressive of a mental state, it is the name of a purely simple idea, and cannot be defined. The history of its rise is briefly this. Such is our nature, that we

cannot exist, without having the notion of existence. Its origin is inseparable from the mere fact, that we have thought, feeling, and judgment.

II,—MIND. The origin of the notion of mind is similar to that of existence. Neither of them can be strictly and properly referred to the senses. We do not see the mind, nor is it an object of touch, nor of any other sense. Nor, on the other hand, is the notion of mind a direct object of the memory, or of reasoning, or of imagination. The notion arises naturally, or is suggested from the mere fact, that the mind actually exists, and is susceptible of various feelings and operations.

III,—Similar remarks will apply to the notions, (whether we consider them as simple or complex,) of SELF-EXISTENCE and PERSONAL IDENTITY. At the very earliest period they flow out, as it were, from the mind itself; not resulting from any prolonged and laborious process, but freely and spontaneously suggested by it. This is so true, that no one is able to designate either the precise time, or the precise circumstances, under which they originate; for they spring into being under all circumstances. We cannot look, or touch, or breathe, or move, or think without them. These are riches of our mental nature too essential and important to be withheld, or to be given only on rare and doubtful occasions; but are spread abroad in all time and place, in all action and feeling.—(See, in connection with this section, §. §. 17, 18, 19.)

§. 307. *Of the nature of unity and the origin of that notion.*

Another important notion, properly entitled to a consideration here, is that of UNITY. We shall decline attempting to explain the nature of unity, for the simple reason that nothing is more easy to be understood; every child knows what is meant by *One*. And how can we explain it, if we would? We can explain a hundred by resolving it into its parts; we can explain fifty or a score by making a like separation of the whole number into the subordinate portions, of which it is made up; but when we arrive at unity, we must stop, and can go no further.

It is true, attempts have been made to define it, but like many other such attempts, they have proved futile. Unity has been called *a thing indivisible in itself, and divided from every thing else*. But this makes us no wiser. Is it any thing more than to say, that the unity of an object is its indivisibility? Or in other words, that its unity is its unity?

As the idea of unity is one of the simplest, so it is one of the earliest notions which men have. It originates in the same way, and very nearly at the same time, with the notions of existence, self-existence, personal identity, and the like. When a man has a notion of himself, he evidently does not think of himself as two, three, or a dozen men, but as one. As soon as he is able to think of himself as distinct from his neighbour, as soon as he is in no danger of mingling and confounding his own identity with that of the multitude around him, so soon does he form the notion of unity. It exists as distinct in his mind, as the idea of his own existence does; and arises there immediately successive to that idea, because it is impossible, in the nature of things, that he should have a notion of himself as a twofold or divided person.

Unity is the fundamental element of all enumeration. By the repetition or adding of this element, we are able to form numbers to any extent. These numbers may be combined among themselves, and employed merely as expressive of mutual relations; or we may apply them, if we choose, to all external objects whatever, to which we are able to give a common name.—(See §. 256.)

§. 308. *Nature of succession, and origin of the idea of succession.*

Another of those conceptions, which naturally offer themselves to our notice here, is that of SUCCESSION. This term, (when we inquire what succession is in itself,) is one of general application, expressive of a mode of existence, rather than of existence itself; and in its application to mind in particular, expressive of a condition of the mind's action, but not of the action itself, which that

condition regulates. It is certainly a fact too well known to require comment, that our minds exist, at different periods, in successive states ; that our thoughts and feelings, in obedience to a permanent law, follow each other in a train. This is the simple fact. And the fact of such succession, whenever it takes place, forms the occasion, on which the notion or idea of succession is SUGGESTED to the mind. Being a simple mental state, it is not susceptible of definition ; yet every man possesses it, and every one is rightly supposed to understand its nature.

Accordingly it is not necessary to refer the origin of this idea to any thing external. It is certain, that the sense of smell cannot directly give us the idea of succession, nor the sense of taste, nor of touch. And we well know, that the deaf and dumb possess it, not less than others. The blind also, who have never seen the face of heaven, nor beheld that sun and moon, which measure out for us days and months and years, have the notion of succession. They feel, they think, they reason, at least in some small degree, like other men ; and it is impossible, that they should be without it. The origin, therefore, of this notion is within ; it is the unfailing result of the inward operation to call it forth, however true it may be, that it is subsequently applied to outward objects and events.

§. 309. *Origin of the notion of duration.*

There is usually understood to be a distinction between the idea of succession, and that of duration, though neither can be defined. The idea of succession is supposed to be antecedent in point of time to that of duration ; (we speak now of succession and duration relatively to our conception of them, and not in themselves considered.) Duration must be supposed to exist antecedently to succession in the order of nature ; but succession is the form, in which it is made to apply to men ; and is, therefore, naturally the occasion, on which the idea of it arises in men's minds. Having the notion of succession, and that of personal or self-existence, a foundation is laid for the addi-

tional conception of permanency or duration ; in other words, it naturally arises in the mind, or is suggested, under these circumstances.

As we cannot, according to this view of its origin, have the notion of duration without succession, hence it happens, that we know nothing of duration when we are perfectly asleep, because we are not then conscious of those intellectual changes which are involved in succession. If a person could sleep with a perfect suspension of all his mental operations from this time until the resurrection, the whole of that period would appear to him as nothing. Ten thousand years passed under such circumstances would be less than a few days or even hours.

That the notion of succession is antecedent to, and is essential to that of duration, is in some measure proved by various facts. There is for example, in the Proceedings of the French Royal Academy of Sciences in 1719, a statement to the following effect.—There was in Lausanne a nobleman, who, as he was giving orders to a servant, suddenly lost his speech and all his senses. Different remedies were tried, but, for a very considerable time, without effect. For six months he appeared to be in a deep sleep, unconscious of every thing. At the end of that period, however, resort having been had to certain surgical operations, he was suddenly restored to his speech, and the exercise of his understanding. When he recovered, the servant, to whom he had been giving orders, happening to be in the room, he asked him if he had done what he had ordered him to, not being sensible, that any interval, except perhaps a very short one, had elapsed during his illness.*

§. 310. *Of time and its measurements, and of eternity.*

When duration is estimated or measured, we then call it Time. Such measurements, as every one is aware, are made by means of certain natural, or artificial motions.

* The Academy received this statement from Crousaz, Mathematical Professor at Lausanne, and author of a Treatise on Logic, &c.

The annual revolution of the sun marks off the portion of duration, which we call a YEAR ; the revolution of the moon marks off another portion, which we call a MONTH ; the diurnal revolution of the sun gives us the period of a DAY ; the movements of the hands over the face of a clock or watch give the diminished durations of hours and minutes. This is TIME, which differs from duration, only in the circumstance of its being measured.

What we call Eternity is only a modified or imperfect time, or rather time not completed. We look back over the months and days and years of our former existence ; we look forward and onward, and behold ages crowding on ages, and time springing from time. And in this way we are forcibly led to think of time unfinished, of time progressive but never completed ; and to this complex notion we give the name of Eternity.

§. 111. *Marks or characteristics of time.*

To this notice of the origin of the notion of time, it will not be improper to add, as it is one of great importance, some of its marks or characteristics.

I,—Time, (meaning by the term duration as existing in succession, and as susceptible of being measured,) is strictly and properly predicable only of finite beings, and not of the Supreme Being. It is evident, that, in its application to the human mind, time becomes a law or fixed condition of the mental action, a restriction placed upon it, a sort of veil, which would hide knowledge from us, were it not that it is drawn up gradually, and lets it in by degrees. But it is equally evident there can be no law of this nature restricting the Divine Mind. Those multiplied facts and events, which are brought one after another before the minds of men, in consequence of their limited mental constitution, are spread out at once before the Divine Mind, as on a map. Whether past, present, or future, they are embraced and comprehended in a single glance. In this respect there is not the slightest analogy between the Supreme Mind, and the minds of men.

II,—Time is not susceptible of any visible or outward

representation, as might be expected, if its origin had been external instead of internal. It is true, we apply language to time, which would imply, if strictly interpreted, that it has extension or length. We speak of a *long*, or *short* time, &c. But this is owing partly to certain casual associations, and partly to the imperfection of language, and not to any thing in the nature of time itself.

III,—Time, as it exists in our mental apprehension and in its relation to the intellect, is inseparable from events. Whatever event has taken place, whether it be the desolation of a province by an earthquake, or the fighting of a battle, or the forming of a political constitution, or whatever else, although we are ignorant of the hour, the day, or the month, we cannot possibly conceive of them, independently of time. This is a fixed, immutable, and ultimate condition of all our perceptions, so far as they regard events.

IV,—Time, in its specific and appropriate nature is indestructible, while the human soul remains the same it now does. It is not within the limits of human capability to contemplate events as the Supreme Being does, at once and simultaneously ; but it can be done in succession alone ; nor have we reason to suppose that it will ever be otherwise. It is true, the Angel shall at last appear, standing on the land and the sea, and shall swear, that time shall be no longer ; yet the time, which the angel of the Apocalypse is destined thus to abolish, is only that, which is measured by these stars, this moon, and the revolutions of this earth. As long as the human soul exists, in whatever part of the universe, there must at least be, not only duration, but duration as existing in succession, unless the nature of the soul be fundamentally changed.

§. 312. *The idea of space not of external origin.*

Another of those notions, the origin of which we propose to consider under the head of Suggestion, is the idea of SPACE.—Perhaps it will be asked, why we have disregarded in this instance the authority and example of Mr. Locke, who has ranked it with the notions of Exter-

nal origin, or in his own phraseology, with those which come into the mind by the way of sensation. And certainly it might be expected, that we should assent to that ancient arrangement, if it could be definitely shown to us, which of the senses it is to be ascribed to. But it is obvious, that this cannot easily be done.

If it were of external origin, if it could properly be said to come into the mind by the way of sensation, we should be able to make such a reference of it. But let us inquire. It will evidently not be pretended, that the notion of space is to be ascribed to the senses of taste, of smell, or of hearing. And can it be ascribed to the sense of touch? Is it a matter of feeling? A single consideration will suggest a satisfactory answer. It will certainly be acknowledged, that we can have no knowledge, by the sense of touch, (with the single exception perhaps of the ideas of heat and cold, which are sometimes ascribed to it,) of any thing which does not present some resistance. The degree of resistance may greatly vary, but there will be always some. But no one will undertake to say, that resistance is a quality of space, or enters in any way into his notion of it.

Nor are there less obvious objections to regarding it as a direct object of sight. The sense of sight gives us no direct knowledge of any thing but of colours; all other visual perceptions are original in the sense of touch, and are made the property of the sight by transference. No one certainly ever speaks of space as red, or white, or of any other colour, or conceives of it as such.

There is another consideration, adverse to ascribing the idea of space to the senses, applicable equally to the sight and the touch. Every thing, coming within the cognizance of those two senses, (with the exception already alluded to,) has form, limits, bounds, place, &c. But the idea, to which we are now attending, is utterly exclusive of every thing of this nature; it is not susceptible of circumscription and figure. So far from it, when we escape beyond the succession of circumscribed and insulated objects, we have but just entered within its empire. If we let the

mind range forth beyond the forms immediately surrounding us, beyond the world itself, beyond all the systems of worlds in the universe ; if we stand in our conception on the verge of the remotest star, and look downward and upward ; it is then the idea of space rushes upon the mind with a power before unknown.—These considerations clearly lead to the conclusion, that the notion of space is not susceptible of being ascribed directly to sensation in any of its forms, and is not, in the proper sense of the terms, of external origin. It may perhaps be maintained, that we shall find an adequate account of its origin, if we combine the aid of abstraction with sensation. It is admitted, that by the sense of touch we have a knowledge of the extension of bodies, which includes, when it is contemplated under different views, length, breadth, height, &c. But still it does not appear, how abstraction, applied to extension, or any thing included in extension, can give us space. It is evident, that the abstract notion, which we form of the length of a body, is different from the one in question. And if we abstract height or breadth, these also come short of giving us space. If we could abstract height, length, and breadth at once, and then combine them together, we should not even then have space, but on the contrary a solid body.

§. 313. *The idea of space has its origin in suggestion.*

What then shall we say of the origin of the notion of space ? When pressed on this point, we have but one answer to give ; it is the natural offspring of the mind ; it is a creation of the soul, wholly inseparable from its elementary constitution and action ; an intimation, coming from an interior and original impulse. The opinion of Cousin, (not to mention that of others of a like import,) closely approximates to this statement.

After criticising upon Locke, as Mr. Stewart had done before him, and asserting the futility of pretending to derive this notion directly from the senses, he adds as follows ; “ *Au contraire, l'idée d'espace nous est donnée, à*

l'occasion de l'idée de corps, par la pensée, l'entendement, l'esprit, la raison, enfin par une puissance autre que la sensation."*

It remains to be added, that, while we cannot directly refer the notion in question to the senses, we cannot even state with certainty any particular occasion on which it arises, for we have the notion at a period further back than we can remember. On this point however, it is undoubtedly true, that we may advance opinions more or less probable.—It is, for instance, a supposition not altogether worthless, that motion may have been the original occasion of the rise of this idea. At an early period we moved the hand, either to grasp something removed at a little distance, or in the mere playful exercise of the muscles, or perhaps we transferred the whole body from one position to another ; and it is at least no impossibility, that on such an occasion the idea of space may have been called forth in the soul.

But there is another supposition, still more entitled to notice, the one referred to in the above quotation from Cousin. Our acquaintance with external bodies, by means of the senses, may have been the *occasion* of its rise, although the senses themselves are not its direct source. It is certain, that we cannot contemplate any body whatever, an apple, a rose, a tree, a house, without always finding the idea of space a ready and necessary concomitant. We cannot conceive of a body, which is *no-where*. So that we may at least date the origin of the idea of space as early as our acquaintance with any external body whatever. In other words, it is a gift of the mind, made simultaneously with its earliest external perceptions.

314. *Characteristic marks of the notion of space.*

What has been said has prepared the way for the better understanding of the characteristic marks of space, as it exists in the mind's view of it. Of these marks there are four, which will help to distinguish it.

I,—Like duration or time, space is not capable of being visibly represented. The remarks, which have al-

* L' Histoire de la Philosophie, Tome II, Dix-septieme Leçon.

ready been made, clearly evince this. Nothing can be visibly represented, which does not come within the direct range and cognizance of the senses, as space does not.

II,—It has no form nor limits. This might perhaps be considered as naturally resulting from the characteristic first mentioned. And besides we may safely appeal here to general experience, and assert without hesitation, that no man limits space in his conception of it, nor is it even in his power so to do.

III,—It is absolute and necessary. We speak of a thing as absolute which is not dependent on another, and is unalterable. This is not the case with any thing whatever, which we become acquainted with by means of the direct agency of the senses. All such bodies are constantly changing, and there is no difficulty in the supposition, that they may all be struck out of existence. But it is impossible for us to associate the idea of non-existence with space. It is unalterably the same. But there is evidently nothing unalterable, which is not naturally and necessarily so. It is on this ground therefore, that we assign to space the characteristic of being absolute and necessary.

IV,—A fourth characteristic is, that it is the condition of the existence of all bodies ; that is to say, it is impossible for us to conceive of a body without associating the notion of space with it. We are so constituted, that what we understand by space is utterly inseparable from every thing outward, which has outlines and form. So that we may truly say of space, that it is the condition of the existence of all bodies, at least relatively to ourselves. And hence, as it is internally conceived of, it becomes a great law of the mind, modifying and limiting all its outward perceptions. (See §.§. 64, 65.)

§. 315. *Of the origin of the idea of power.*

Under the head of Suggestion the idea of POWER properly belongs. Every man has this notion ; every one feels too, that there is a corresponding reality ; and we may undoubtedly add, that every one knows, although there is a great original fountain of power, that he has a portion

of it in his own bosom, and in his own arm. There is a vast unseen power, which has reared the mountains, which rolls the ocean, which propels the sun in his course, and holds the stars in their orbits ; but man too has power in the humble sphere, which Providence has allotted him ; and is not left desolate. This is a simple statement of the fact. Power goes hand in hand with existence, intelligence, and accountability, and they are alike scattered through the Universe.

But the question here is, not what power is in itself, nor whether man possesses power in fact, but how the notion of power arises in the human mind ? Before answering this question, the remark is to be made, that power is an attribute of mind, and not of matter. Matter may be the medium, through which the operations of power are exhibited, but it has no power in itself. Hence we are led to observe, that the notion of power originates, in the first instance, in mind, and not in what we see in matter.

Perhaps this remark may be liable to misapprehension ; and therefore, it seems necessary to offer some explanation. The mind, having power, exercises it in reasoning, consulting, forming plans for the future, &c ; and particularly in the putting forth of volition. We will to lift a hand or foot, and the result immediately follows ; we will to go from one place to another, and we immediately put our determination into execution ; we will to complete some projected undertaking, and the deed is consequent on the volition. And we behold in others what we experience in ourselves. Paul said to the impotent man of Lystra, Stand upright on thy feet, and he leaped and walked. The Savior said, Lazarus, come forth, and he arose from the dead. In the beginning the world was in darkness ; God said, Let there be light, and light was.

On such occasions we may suppose, that the idea of power arises in the mind. It is suggested by the mind itself ; and such is our mental nature, that it cannot be otherwise.

But we are perhaps called upon to give a definition or

verbal explanation of the notion of power. The reply is, that the idea, which the mind forms of it, is a simple and uncompounded one. It can be resolved into no subordinate elements, and therefore stands on the same footing with our other simple notions. It would be as unavailing to attempt to explain it by a mere combination of words, as it would to give a verbal definition of the simple sensations of taste, of hearing, and of sight.

§. 316. *Notion of an original or first antecedent.*

The only other notion, we shall mention under the present head, is that of original antecedence. It will perhaps be said, that this notion arises by experience; but experience properly concerns only the circumstances, which lead to it and under which it arises, and not the mental cause itself. Let us, for example, suppose a person entirely separated from the rest of the world, dwelling in some distant island, with no means of mental culture but such as nature herself affords, furnished, as it were, only with the senses, and with the variety of objects around him, fitted to operate upon them. As he walks abroad in his insulated domain, he finds its shores worn away, and he at once discovers the antecedent in the motion of the ocean's waves against it. He beholds the prostration of the neighbouring forest, and he detects the antecedent in the strong arm of the whirlwind. He sees the grass grow, and the trees put forth their buds and leaves, and the flowers open, and he finds the forerunner of these delightful effects in the warmth and the showers of the summer. But his mind is not satisfied with this; he asks, or rather his nature within him asks, Who guided the ocean? Who gave strength to the whirlwind? And thus the mind will inevitably go on from events to their precursors, from antecedent to antecedent.

No man stops short of this. What would be the thoughts of our supposed solitary islander, will be found to be the thoughts of all. We ourselves, as well as others, behold the world covered with brightness: but, instead of sitting

supinely and ignorantly in its beams, we never fail to look for the forerunner, and we find it in the luminaries of the sun and moon, and in those smaller fountains of effulgence, which are opened in various parts of the visible heavens. And then we imagine ourselves standing in the midst of one of those orbs, and the inquiry again arises, Who supplies these fountains? Where is the antecedent power, that kindled up these piles of heavenly radiance?—The mind itself, therefore, suggests the notion of something which goes before, of an antecedent, under every combination of circumstances; and not only believes, that there must have been such, but seeks for it. The event, the fact, whatever takes place in nature, calls for its antecedent, as “deep calls to deep.” It is a voice, if we may again be permitted in a Scriptural allusion, which is “gone out through all the earth, and its words to the end of the world.” But there is a time, when the cry is silent; a limit, beyond which the inquiry cannot be pushed; and we must at length stop at an original and necessary antecedent, with which all succession begins, and on which all events are dependent.

Hence we say, that the notion of *original* antecedence, in particular, is a matter of suggestion. It does not have its origin in the senses. It evidently does not come within the range of consciousness, because it is something, which, from its very nature, we are not, and cannot be conscious of. It is not the result of relative suggestion, since there is nothing compared together; the mind has arrived at a point where it can go no further, and as there are no objects of comparison, there are of course no feelings of relation. And furthermore it is not the result of reasoning, since there is evidently no reasoning applicable to it, which does not take for granted, that there is no beginning nor change of existence without a cause. That there must be an original antecedent, (when combined with the notion of power, the great first cause of all things,) without which subsequent effects and events could not have taken place, must undoubtedly be assumed; for the chain of reasoning, although it may go on from an-

ecedent to antecedent, from cause to cause, must stop somewhere ; evidently no human strength can carry it upward to that, which is infinitely removed ; but that mysterious first cause must condescend to come down and meet it. And it has come. Reasoning does not frame this notion ; nevertheless it exists, and with no small degree of distinctness and strength, being necessarily called forth in the soul by means of that primitive or original suggestion, which we have been considering.—We shall pursue, in this place, this particular source of our knowledge no further. But in leaving it, we would not be understood to intimate, that the notions of existence, mind, self-existence, personal identity, unity, succession, duration, time, space, power, and original antecedence are all, which suggestion furnishes. No doubt, on a careful examination, various others may be found.

CHAPTER THIRD.

CONSCIOUSNESS.

§. 317. *Consciousness the second source of internal knowledge ;
its nature.*

THE second source of that knowledge, which, in distinction from sensations and external perceptions, is denominated Internal, is CONSCIOUSNESS. So numerous are the ideas from this source, constantly forcing themselves on our attention and modifying the whole mental action, that it was considered justly entitled to be ranked among the laws of belief. Although that was a view of consciousness, altogether different from what we propose to take at present, we found occasion at that time to remark particularly on its nature. Nor is it necessary in that respect, to do more than repeat essentially what has already been said. Consciousness is a term, appropriated to express objects, which belong to the mind itself, and which do not, and cannot exist, independently of some mind. Imagining and reasoning are terms, expressive of real objects of thought ; but evidently they cannot be supposed to exist, independently of some mind, which imagines and reasons. Hence, in the chapter just referred to, (§. 76,) consciousness was described as embracing in itself the three following distinct notions at least ; viz., (1) the idea of self or of personal existence, expressed in English by the words SELF, MYSELF, and the personal pronoun I ; (2) some quality, state, or

operation of the mind, whatever it may be; and (3) a relative perception of possession, appropriation, or belonging to. For instance, a person says, I AM CONSCIOUS OF LOVE, OR OF ANGER, OR OF PENITENCE. Here the idea of SELF or of personal existence is expressed by the pronoun I; there is a different mental state and expressed by its appropriate term, that of the affection of ANGER, &c; the phrase, CONSCIOUS OF, expresses the feeling of relation, which instantaneously and necessarily recognizes the passion of anger as the attribute or property of the subject of the proposition. And in this case, as in all others where we apply the term under consideration, consciousness does not properly extend to any thing, which has an existence, extraneous to the conscious subject or soul itself.

§. 318. *Objections to Locke's Essay concerning Human Understanding.*

It is proper to remark here, that the term REFLECTION, as used by Mr. Locke in his book on Human Understanding, has been generally understood, (whether justly or not,) as synonymous with Consciousness, as here explained. That writer held, as is well known, that the origin of human knowledge is two-fold, External and Internal; attributing all external knowledge to sensation, and all internal knowledge to reflection. Supposing therefore, that he meant by the term REFLECTION, what is meant at the present day by CONSCIOUSNESS, his commentators and critics have found a difficulty in explaining the origin of those notions among others, which were ascribed in the last chapter to suggestion. Writers, who are in general professed followers of Mr. Locke, and of whose candour it would be highly uncharitable to doubt, appear to agree in opinion, that his valuable Essay is defective in this respect. And it can hardly be doubted, that this is a point, in which it is chiefly assailable, viz, in maintaining the doctrine, that all our internal knowledge is from reflection, understanding the term as synonymous with consciousness. A few quotations will help to show the opinions of respectable writers on this subject.

Dr. REID, in his Third Essay on the Intellectual Pow-

ers, has this passage. “Mr. Locke says, that by reflection he would be understood to mean *the notice, which the mind takes of its operations and of the manner of them*. This, I think, we commonly call Consciousness ; from which indeed we derive all the notions we have of the operations of our own minds; and he often speaks of the operations of our own minds, as the only objects of reflection.—When reflection is taken in this confined sense, to say, that all our ideas are ideas either of sensation or reflection, is to say that every thing we can conceive is either some object of sense or some operation of our own minds, which is far from being true.”

Dr. Price, in his Review of the Principal Questions and Difficulties in Morals, remarks as follows. “Sensation and reflection have been commonly reckoned the sources of all our ideas ; and Mr. Locke has taken no small pains to prove this. How much soever, on the whole, I admire his excellent Essay, I cannot think him sufficiently clear or explicit on this head. It is hard to determine exactly what he meant by *sensation and reflection*. If by the former we understand the effects arising from impressions made on our minds by external objects, and by the latter, *the notice the mind takes of its own operations*; it will be impossible to derive some of the most important of our ideas from them.”

§. 819. *Opinions of Mr. Stewart on this subject.*

Mr. Stewart, in the course of the First of his Philosophical Essays, which is entitled, *ON LOCKE'S ACCOUNT OF THE SOURCES OF HUMAN KNOWLEDGE*, shows at some length, that we cannot explain the origin of the notions of self, of personal identity, causation, time, number, &c., on the doctrine of Mr. Locke, as it is generally understood ; and that they must be regarded as necessarily arising in the human understanding in the exercise of its different faculties. Speaking on the subject of Mr Locke's plan in his Elements of the Philosophy of the Human Mind, (Chap. I ; §. 4,) he remarks as follows, “These two sources, according to him, furnish us with all our simple ideas, and the only power, which the mind possesses over them, is to perform certain operations, in the way of comparison, abstraction,

generalization, &c, on the materials, which it thus collects in the course of its experience. The laudable desire of Mr. Locke, to introduce precision and perspicuity into metaphysical speculations, and his anxiety to guard against error in general, naturally prepossessed him in favour of a doctrine, which, when compared with those of his predecessors, was intelligible and simple, and which by suggesting a method, apparently easy and palpable, of analyzing our knowledge into its elementary principles, seemed to furnish an antidote against those prejudices, which had been favored by the hypothesis of innate ideas. It is now a considerable time since this fundamental principle of Mr. Locke's system began to lose its authority in England."

In these passages, (and others of a like purport might easily be brought together, if it were deemed necessary,) we see more fully the reason, why it was thought requisite to assign some of those elementary ideas, which come under the general head of Internal Origin, to SUGGESTION. They evidently cannot be assigned to consciousness, without introducing perplexity and confusion into this latter subject. But having attended to those notions, (comparatively few in number but very important,) which are furnished us by an original or primitive intimation of our nature, CONSCIOUSNESS, considered as a new and distinct source of internal knowledge, naturally has the next claim on our notice. It is on these grounds, that the subject occupies its present place.

§. 320. *Instances of notions originating from consciousness.*

. It would be no easy task to point out the numerous notions, coming within the range and cognizance of consciousness; nor is there any special reason, why this should be attempted. A few instances will suffice to show, how fruitful a source of experience and of knowledge this is.

I,—All the forms and shades of belief are matters of consciousness. We are so constituted, that the mind necessarily yields its assent, in a greater or less degree, when evidence is presented. These degrees of assent are exceedingly various and multiplied, although only a few of them

are expressed by select and appropriate names; nor does it appear to be necessary for the ends of society, or for any other purpose, that it should be otherwise. Some of them are as follows; doubting, assenting, presumption, believing, probability, high probability, certainty, &c.

II,—The names of all intellectual powers and operations are expressive of the subjects of our consciousness. Among others, the terms, thinking, attending, remembering, comparing, judging, abstracting, reasoning, imagining, &c.

III,—Consciousness includes likewise all our emotions, (every thing coming within the range of the **SENTIENT** part of our nature,) as the emotions of the beautiful, the grand, the sublime, the ludicrous; the feelings of pleasure and pain, of desire and aversion; of hope and joy, of despondency and sadness, and a multitude of others.

IV,—Here also originates our acquaintance with the complex emotions or passions. A man bestows a benefit upon us, and we are conscious of a new complex feeling, which we call **GRATITUDE**. Another person does us an injury; and we are conscious of another and distinct feeling, which we call **ANGER**. In other words, we feel, we know, that the passion exists, and that it belongs to ourselves; and it is the same of distrust, jealousy, peevishness, hatred, revenge, friendship, sympathy, love, &c.

V,—All the moral and religious emotions and affections belong here; such as approval, disapproval, remorse, humility, repentance, religious faith, forgiveness, benevolence, the sense of dependence, adoration.—When we consider, that the mind is constantly in action, that, in all our intercourse with our fellow-beings, friends, family, countrymen, and enemies, new and exceedingly diversified feelings are called forth, that every new scene in nature, and every new combination of events have their appropriate results in the mind, it will be readily conjectured, that this enumeration might be carried to a much greater extent. What has been said will serve to indicate some of the prominent sources for self-inquiry on this subject.

CHAPTER FOURTH.

RELATIVE SUGGESTION.

§. 321. *Of the susceptibility of perceiving or feeling relations.*

It is not inconsistent with the usage of our language to say, that the mind brings its thoughts together, and places them side by side, and compares them. Such are nearly the expressions of Mr. Locke, who speaks of the mind's bringing one thing to and setting it by another, and carrying its view from one to the other. And such is the imperfect nature of all arbitrary signs, that this phraseology will probably continue to be employed, although without some attention it will be likely to lead into error. Such expressions are evidently of material origin, and cannot be rightly interpreted without taking that circumstance into consideration. When it is said, that our thoughts are brought together, that they are placed side by side and the like, probably nothing more can be meant than this, that they are immediately successive to each other. And when it is further said, that we compare them, the meaning is, that we perceive or feel their relation to each other in certain respects.

The mind, therefore, has an original susceptibility or power, answering to this result; which is sometimes known as its power of RELATIVE SUGGESTION, and at other times, the same thing is expressed by the term JUDGMENT,

although the latter term is not limited in its use to the expression of this feeling.*——We arrive here, therefore, at an ultimate fact in our mental nature. The human intellect is so constituted, that, when it perceives different objects together, or has immediately successive conceptions of any absent objects of perception, their mutual relations are immediately felt by it. It considers them as equal or unequal, like or unlike, as having the same or different causes and ends, and in various other respects.

§. 322. *Occasions on which feelings of relation may arise.*

The occasions, on which feelings of relation may arise, are almost innumerable. It would certainly be no easy task to specify them all. Any of the ideas, which the mind is able to frame, may either directly, or indirectly, lay the foundation of other ideas of relation, since they may in general be compared together; or if they cannot themselves be readily placed side by side, may be made the means of bringing others into comparison. But those ideas, which are of an external origin, are representative of objects and their qualities; and hence we may speak of the relations of things no less, than of the relations of thought. And such relations are every where discoverable.

We behold the flowers of the field, and one is fairer than another; we hear many voices, and one is louder or softer than another; we taste the fruits of the earth, and one flavour is more pleasant than another. But these dif-

* The word JUDGMENT is sometimes used as expressive of the result of a train of reasoning, and as synonymous with conclusion or opinion. But not unfrequently it is employed with a more restricted import, and as synonymous with relative suggestion. The following passage of Brown supports this remark.——“With the susceptibility of relative suggestion, the faculty of *judgment*, as that term is commonly employed, may be considered as nearly synonymous; and I have accordingly used it as synonymous in treating of the different relations, that have come under our review.” *Philosophy of the Human Mind*. Lect. 51.

ferences of sound and brightness and taste could never be known to us without the power of perceiving relations.

Again, we see a fellow being ; and as we make him the subject of our thoughts, we at first think of him only as a man. But then he may at the same time be a father, a brother, a son, a citizen, a legislator ; these terms express ideas of relation.

§. 323. *Of the use of correlative terms.*

Correlative terms are such terms, as are used to express corresponding ideas of relation. They suggest the relations with great readiness, and by means of them the mind can be more steadily, and longer, and with less pain, fixed upon the ideas, of which they are expressive. The words father and son, legislator and constituent, brother and sister, husband and wife, and others of this class, as soon as they are named, at once carry our thoughts beyond the persons, who are the subjects of these relations, to the relations themselves. Wherever, therefore, there are correlative terms, the relations may be expected to be clear to the mind.

The word, CITIZEN, is a relative term, but there being no correlative word, expressing a precise corresponding relation, we find it more difficult to form a ready conception of the thing signified, than of SUBJECT, which has the correlatives, ruler and governor.

It is hardly necessary to remind any one, that the relation is something different from the things related. The relations are often changing, while the subjects of them remain the same. A person may sustain the relation and the name of a father to-day ; but the inroads of death may on the morrow deprive him of his offspring, and thus terminate that character, which the relative term, father, expresses.

§. 324. *Of the great number of our ideas of relation.*

Mr. Locke has the remark, that it would make a volume to go over all sorts of relations, and with good reason ; since they are as numerous, as that almost endless va-

riety of respects, in which our ideas may be compared together, and as the great multitude of circumstances, which are to be taken into view in such comparisons. With the single idea of man how many others are connected in consequence of the various relations, which he sustains.

He may, at one and the same time, be a father, brother, son, brother-in-law, son-in-law, husband, friend, enemy, subject, general, judge, patron, townsman, servant, master, possessor, superior, inferior, greater, smaller, older, younger, wiser, contemporary, like, unlike, together with sustaining a variety of other relations too numerous to be mentioned.

Such is the number of relations, that it is found difficult to reduce them to classes; and probably no classification of them, which has been hitherto proposed, exhausts them in their full extent. The most of those, which it will be necessary to notice, may be brought into the eight classes of relations of IDENTITY and DIVERSITY, of FITNESS or UNFITNESS, of DEGREE, of PROPORTION, of PLACE, of TIME, of POSSESSION, and of CAUSE and EFFECT.

§. 325. *Of relations of identity and diversity.*

The first class of ideas of relation, which we shall proceed to consider, are those of IDENTITY and DIVERSITY.

Such is the nature of our minds, that no two objects can be placed before us essentially unlike, without our having a perception of this difference. When, on the other hand, there is an actual sameness in objects contemplated by us, the mind perceives or is sensible of their identity. It is not meant by this, that we are never liable to mistake; that the mind never confounds what is different, nor separates what is the same; our object here is merely to state the general fact.

Two pieces of paper are placed before us, the one white and the other red; and we at once perceive, without delaying to form comparisons and to reason upon it, that the colours are not the same. We immediately and necessarily perceive a difference between a square and a circle, a triangle and a parallelogram, the tree and the turf from which it

springs upward, a house and the neighbouring hill, a horse and his rider.

Whatever may be the appearance of this elementary feeling at first sight, it is undoubtedly one of great practical importance. It has its place in all forms of reasoning, as the train of argument proceeds from step to step ; and in Demonstrative reasoning in particular, it is evident, that without it we should be unable to combine together the plainest propositions.

§. 316. *Of the relations of identity and diversity called axioms.*

The remark at the close of the last section will be better understood, on a little further explanation. The statement was, that without the relative feelings of IDENTITY and DIVERSITY, (otherwise called relations of AGREEMENT and DISAGREEMENT,) we should be incapable of demonstrative reasoning. Such reasoning, as is well known, is carried on by the help of axioms. And we accordingly never fail to find a number of axioms placed at the head of geometrical, and other treatises of a like nature, such as the following ; Things equal to the same are equal to one another ; If equals be added to equals, the wholes are equal ; The whole is greater than a part ; Things, which are double of the same, are equal to one another ; Things, which are halves of the same, are equal to one another ; Magnitudes, which coincide with one another, (that is, which exactly fill the same space,) are equal to one another, &c.

It will be admitted, (and we shall see it perhaps more clearly, when we again have occasion to revert to this subject,) that demonstrative reasoning implies a constant reference to such axioms ; that its advancement through the successive series of propositions is by means of their aid. But it is too evident to require remark, that these axioms are nothing more than particular instances of the relative feeling of identity and diversity, expressed in words. It is the feelings of agreement and disagreement, actually arising in the mind, and not the mere verbal expression of them, which forms the true cement and bond of the successive

links, and imparts consistency and strength to the whole chain.

§. 327. (II.) *Relations of fitness or unfitness.*

The second class, (although, it may be remarked here, it is of but little practical consequence in what order they are arranged,) are the relations of **FITNESS** or **UNFITNESS**. Or they may be otherwise termed relations of **suitableness** or **unsuitableness**, **congruity** or **incongruity**. The feeling of the relation of fitness or unfitness arises, as every one's recollection will not fail to inform him, on a multitude of occasions. Coming, for the first time, into the neighborhood of a well-constructed temple or other public edifice, we at once make it the subject of our inspection and examination. With a glance of the eye, we bring the height, and breadth, and length, and local situation of the building under review. We attentively consider the windows, and doors, and vestibule ; the size, formation, number, and position of the columns ; the place and character of the ornamental parts, and we cannot avoid exercising the feeling of fitness, suitableness, or congruity.—In external nature every thing has the character of fitness. If the human mind ever disapproves of the forms and correspondencies of objects, it is because it passes a judgment on a partial knowledge of them, and without waiting to understand all the subordinate parts. But in respect to the imitative combinations of human genius, there is by no means an equal perfection of foresight and excellence of execution ; so that sometimes we have the feeling of fitness and approve ; while at other times, and more frequently, we are sensible of an incongruity, and cannot withhold our disapprobation.

Again, we find an occasion for the rise of this relative feeling in Moral reasoning. For instance, we have before us some point to be proved, some general outline requiring all our strength of investigation. Various facts and considerations are brought forward and compared together ; some are received, and others are rejected. And if we are asked, On what grounds ? We can only say, that some are felt to be fit and suitable to be received, and others are not.

In the efforts of Imagination also of whatever kind, the same feeling is exercised. The poet, for instance, gives existence to some retired spot, laved by beautiful streams, enriched by the choicest flowers and verdure, crowned here and there with shady trees, from the midst of which springs to light some edifice, as if the work of enchantment, where form, and column, and architrave breathe out the inspiration of genius, and excel the beauties of ancient architecture.—Such a creation implies at every step the exercise of the feeling under consideration. When this fair creation arose in the poet's mind, the feeling of congruity, of fitness, was felt continually, as it developed itself before him.

§. 328. (III.) *Relations of degree, and names expressive of them.*

Another class of those intellectual perceptions, which are to be ascribed to RELATIVE SUGGESTION, may properly enough be termed relations of Degree. Such feelings of relation are found to exist in respect to all such objects, as are capable of being considered as composed of parts, and as susceptible, in some respects, of different degrees.

We look, for instance, at two men ; they are both tall ; but we at once perceive and assert, that one is taller than the other. We taste two apples ; they are both sweet ; but we say that one is sweeter than another. That is to say, we discover, in addition to the mere perception of the man and the apple, a relation, a difference in the objects in certain respects.

There are terms, in all languages, employed in the expression of such relations. In English a reference to the particular relation is often combined in the same term, which expresses the quality. All the words of the comparative and superlative degrees, formed by merely altering the termination of the positive, are of this description, as whiter, sweeter, wiser, larger, smaller, nobler, kinder, truest, falsest, holiest, and a multitude of others. In other cases, (and probably the greater number,) the epithet, expressive of the quality, is combined with the adverbs *more* and *most*, *less* and *least*. But certainly we should not use

such terms, if we were not possessed of the power of relative suggestion. We should ever be unable to say of one apple, that it is sweeter than another, or of one man, that he is taller than another, without considering them in certain definite respects, and without perceiving certain relations. So that, if we had no knowledge of any other than relations of Degree, we should abundantly see the importance of the mental susceptibility under review, considered as a source of words, and of grammatical forms in language.

§. 329. *Relations of degree sometimes exist in adjectives of the positive form.*

Although relations of degree are discoverable more frequently in comparative and superlative adjectives than any where else, they may sometimes be detected also in abstract nouns, which have the appearance of being entirely positive, and not unfrequently in adjectives of the positive form.—Let it be considered, as one instance among many others, what we mean, when we say of a person, He is an **AGED** man. Although the epithet has the positive form, we always tacitly compare the age of the subject of it with that of others, of people in general, and place the particular number of years, to which he may have attained, by the side of that period, which we are in the habit of regarding as the ordinary term of man's pilgrimage.—It is the same, when we say of any person, that he is **YOUNG**. He is then, by a tacit mental reference, considered as falling far short of an assumed period, an approximation to which gives to another person the reputation of age.

Buffier, whose remarks are generally entitled to great weight, happily illustrates this subject as follows.*

“If we should, for example, never have seen or heard of any hill or mountain of greater height than a quarter of a mile, as might happen to some of the inhabitants of the Low Countries, a mountain a mile high would appear a considerable one to such people ; but this mountain would be looked upon as inconsiderable and trifling to the people of the Alps, who are accustomed to see

* First Truths of Pere Buffier, Part II, Chap. XXVIII

mountains of much greater height. This example is so striking, that there is no necessity for any other to make us sensible of the nature of relations that are founded on an arbitrary idea, formed either by accident and occasion, or by our own fancy ; as, if I should take it into my head, without any foundation, that pearls are generally an inch in diameter, I must in that case, look upon all the pearls we have in France as very small.

“ What has been here said of greatness is manifestly applicable to all the other qualities of *long, broad, happy, unhappy, convenient, inconvenient, easy, difficult, rich, poor, good, bad, excellent*, and many others of a similar nature, that have no determinate sense, but by a relation founded on an arbitrary and accidental idea formed within our own minds. A man thought himself miserable in having a slight head-ach : being afterwards seized with a giddiness and violent swimming in the head, the first reflection that occurred to him was, *how happy he was when he had only his first head-ach*. We here see that the arbitrary idea, on which the comparison and relation are founded, changes the signification, and in a manner the nature, of the qualities of *happy and miserable*.”

§. 330. (IV.) *Of relations of proportion.*

Among other relations are those of PROPORTION, which are peculiar in being felt only on the presence of three or more objects of thought. They are discoverable particularly in the comparison of numbers, as no one proceeds far in numerical combinations without a knowledge of them. On examining the numbers two, three, four, twenty, twenty seven, thirty-two, nine, five, eight, and sixteen, we feel certain relations existing among them ; they assume a new aspect, a new power in the mental view. We feel, (and we can *assert*, in reference to that feeling,) that three is to nine as nine to twenty seven ; that two is to eight as eight to thirty two ; that four is to five as sixteen to twenty, &c.

And when we have once felt or perceived such relation actually existing between any one number and others, we ever afterwards regard it as a property inseparable from

that number, although the property had remained unknown to us, until we had compared it with others.—And this is nothing more than what we do in respect to all the subjects of our knowledge. There are many properties of external bodies, which were not known to us at first, but as soon as they are discovered, they are of course embraced in the general notion, which we form of such bodies, and are considered as making a part of it. It is the same in respect to numbers. If, on comparing them with each other, we perceive certain relations never discovered before, those relations ever afterwards make a part of them.

§. 331. (V.) *Of relations of place or position.*

Other feelings of relation arise, when we contemplate the place or position of objects. Our minds are so constituted, that such feelings are the necessary results of our contemplations of the outward objects, by which we are surrounded. Perhaps we are asked, What we mean by position or place? Without professing to give a confident answer, since it is undoubtedly difficult by any mere form of words fully to explain it, we have good grounds for saying that we cannot conceive of any body as having place, without comparing it with some other bodies. If, therefore, having two bodies fixed, or which maintain the same relative position, we can compare a third body with them, the third body can then be said to have place or position.

This may be illustrated by the chess-men placed on the chess-board. We say, the men are in the same place, although the board may have been removed from one room to another. We use this language, because we consider the men only in relation to each other and the parts of the board, and not in relation to the room or parts of the room.

Again, a portrait is suspended in the cabin of a ship of war; the captain points to it, and says to a bystander, that it has been precisely in the same place these seven years. Whereas in point of fact it has passed from Europe to Africa, from Africa to America, and perhaps round the whole

world. Still the speaker uttered no falsehood, because he spoke of the portrait, (and was so understood to speak of it,) in relation to the ship and particularly the cabin ; and not in relation to the parts of the world, which the ship had visited.—Such instances show that place is relative.

Hence we may clearly have an idea of the place or position of all the different parts of the universe, considered separately, because they may be compared with other parts ; although we are unable to form any idea of the place or position of the universe considered as a whole, because we have then no other body, with which we can compare it. If it were possible for us to know all worlds and things at once, to comprehend the universe with a glance, we could not assert, with all our knowledge of it, that it is here, or there, or yonder, or tell, where it would be.

But if place express a relative notion, then it follows, that all words, which involve or imply the place or position of an object, are of a similar character. Such are the words, high and low, superiour and inferiour, (when used in respect to the position of objects,) near and distant, above and beneath, further, nearer, hither, yonder, here, there, where, beyond, within, around, without, and the like.

§. 332. (VI.) *Of relations of time.*

Another source of relative perceptions or feelings is TIME. Time holds nearly the same relation to duration, as position does to space. The position or place of objects is but space marked out and limited ; time, in like manner, is duration, set off into distinct periods ; and as our notions of the place of bodies are relative, so also are our conceptions of events considered as happening in time. It is true, that the notions of duration and space are in themselves original and absolute, but when they are in any way limited, and events are thereby contemplated in reference to them under the new forms of place and time, certain new conceptions arise, which are relative.

All time is contemplated under the aspects of past, present, or future. We are able chiefly in consequence of the

revolutions of the heavenly bodies, to form a distinct notion of portions of time, a day, a month, a year, &c ; we can contemplate events, not only as existing at present, but as future or past. But always when we think or speak of events in time, (in other words when we speak of the *date* of events,) there is a comparison, and a feeling of relation.

What, therefore, is the import of our language, when we say, the independence of the North American colonies was declared, July 4th, 1776.—The meaning of these expressions may be thus illustrated. We assume the present year, 1830, as a given period and reckon back to the year, *one*, which coincides with the birth of our Saviour ; then the year, 1776, expresses the distance between these two extremes, viz. one, and eighteen hundred, thirty. This seems to be all we learn, when we say, the Independence of the United States was declared at the period above mentioned.

We mean the same thing, and convey the same idea, whether we say that the Saviour was born in the year, *one*, of the Christian era, or, in the year, 4004, from the creation of the world. But, in the last case, the year, 4004, expresses the distance between these two extremes, viz, the beginning of the world, and the present time ; while, in the first instance, the event itself forms the beginning of the series.—So that all dates appear to be properly classed under ideas of relation ; and also all names whatever, which are, in any way, expressive of the time of events, as a second, a minute, day, week, hour, month, year, cycle, yesterday, to-morrow, to-day, &c.

§. 333. (VII.) *Of relations of possession.*

Another class of relations may be called relations of *possession*.—Every one knows, that not unfrequently, in his examination of objects, there arises a new feeling, which is distinct from, and independent of the mere conceptions of the objects themselves ; and which, as it differs from other feelings of relation, may be termed the relation of possession, or belonging to. This is one of the earliest feelings, which human beings exercise. When we see the

small child grasping its top and rattle with joy, and disputing the claims of another to a share in them, we may know that he has formed the notion of possession. It is not only formed in early life, but experience fully shows, that it loses neither activity nor strength by the lapse of years.

The application of relative perception in this particular form is abundantly extensive ; and we find here a fruitful source of words. The whole class of possessive pronouns, which are to be found in all languages, have their origin here ; such as *MINE, THINE, YOUR, HIS, HER, &c.* The relation of possession is embodied also in the Genitive case of the Greeks, Latins, Germans, and whatever other languages express relations in the same way ; in the construct state of nouns in the Hebrew and the other cognate dialects ; and in the preposition *OF*, which is the substitute for the genitive termination in English, and the articles *DE, DU, DE'L, and DE LA* in French.

The verbs *TO BE* in English, *ESSE* in Latin, *ETRE* in French, (and the same may undoubtedly be said of the corresponding verb of existence in all languages,) are often employed to express the relation of possession or belonging to. To say that the rose is red or the orange yellow is as much as much as to say, that the qualities of yellowness and redness are the possession of, or belong to the rose and orange. But it will be observed, that the relation is not indicated by the name of the subject, nor by the epithet expressive of its quality, but by the verb, which connects the subject and predicate. And similar remarks will apply to many other verbs.

This class of relations is involved in many complex terms, which imply definite qualities and affections of mind, as friend, enemy, lover, hater, adorer, worshipper. These terms not only indicate certain individuals, to whom they are applied, but assert the existence of certain mental affections as their characteristics, and as belonging to them.

§. 334. (VIII.) *Of relations of cause and effect.*

There are relations also of Cause and Effect. We will

not delay here to explain the origin of the notions of cause and effect any further than to say, that the notion of cause, as it first exists in the mind, includes nothing more than invariable antecedence. When the antecedence to the event, or the sequence of whatever kind, is our own volition, we have the new idea of power. The idea of invariable antecedence, therefore, which of course supposes some sequence, when it is combined with that of power, constitutes the full notion of cause. When the sequence is found invariably to follow, and its existence cannot be ascribed to any thing else, it is called the **EFFECT**.

Cause and effect, therefore, have certainly a relation to each other; it is thus that they exist in the view of the mind and in the nature of things, however true it may be, that men are unable to trace any physical connection between them. We cannot conceive of a cause, if we exclude from the list of our ideas the correlative notion of effect, nor, on the other hand, do we call any thing an effect without a reference to some antecedent. These two notions, therefore, involve or imply the existence of each other; that is, are relative.

If, in our notice of outward objects, we examine particular instances of cause and effect, we shall discover grounds of the correctness of this view. No one is ignorant, that men usually give the name of events, of occurrences, or facts, to those things, which from time to time fall under their notice, when they are considered in themselves. They are the mere facts, the mere events, and nothing more. But when, in the course of their further experience, such events are found to have certain invariable forerunners, they cease to apply these terms, and call them, in reference to their antecedents, **EFFECTS**. And in like manner the antecedents are called **CAUSES**, not in themselves considered, but in reference to what invariably comes after.—In this explanation it is obviously unnecessary, (independently of what has already been said on the subject,) to take into consideration what we understand by Power, which we know and feel to be scattered through the universe; showing itself not only in the

movements and efforts of men, but in every blooming flower, and twinkling star, and in all the works of nature, without which there can be neither cause nor effect, neither antecedence nor sequence, neither strength of harmony nor stability of action.

§. 335. *Instances of complex terms involving the relation of cause and effect.*

The simple relative feeling of cause and effect can of course only exist in such cases of cause and effect as come within the knowledge and cognizance of the mind. This simple feeling, like most other simple states of mind, has but one name, (viz. that of cause and effect,) although arising on innumerable occasions. The relation, however, is embodied in a multitude of names which are expressive, of complex objects, such as printer, sculptor, warrior, poet, manufacturer, painter, &c.

This may be thus illustrated. When we look at any interesting piece of statuary, the sight of it naturally suggests its author. But when our mind is thus directed from the statue to the sculptor, it is evident that we do not think of him as we do of a thousand others, but we combine with the conception of the individual a reference to what he has done. We unite with the mere complex notion of man that of a cause, and this combination evidently alters its character, making it relative instead of absolute.

In like manner when we look at a fine portrait or historical painting, we are naturally reminded of the artist, whose ingenuity has been displayed in its proportions and colouring. But the word painter, which we apply to him, expresses not merely the man, but comprises the additional notion of the relation of cause, which he holds to the interesting picture before us.

§. 336. *Remarks on instituted or conventional relations.*

Perhaps we may be thought not to have completed this subject, without remarking, that there are certain complex terms, expressive of what Mr. Locke calls INSTITUTED or CONVENTIONAL relations. As the epithets indicate, which

are applied to them, they are not permanent, but are dependent on the will, agreement, or appointment of men ; such as citizen or burgher, governor, judge, senator, general, legislator, &c. Accordingly a **CITIZEN** is one, who has a right to the privileges of civil society in a certain place ; that is to say, is the subject of some government, to the principles of whose organization and authority he is supposed to have consented, in the expectation of receiving its protection. A **GENERAL** is one, who has the power to command an army with the various powers incidental to it ; the right being delegated to him by the choice and consent of the civil authority of the country.

But it is obviously unnecessary to stop for the purpose of considering the innumerable and constantly changing relations of this kind. They assume the most multiplied shapes ; not taking their character from any one fixed and definite principle of the mind, but embracing a complication of qualities both absolute and relative.—There are other complex names, involving various relations which chiefly differ from the conventional relations, in being natural and more permanent, such as father, son, brother, sister, nephew, &c.

§. 337 *Connection of relative suggestion or judgment with reasoning.*

It may be profitable to notice here the connection, which relative suggestion has with reasoning in general. Feelings of relation, (or elementary judgments, as they may perhaps properly be called,) are, in some respects, to a train of reasoning, what parts are to the whole. But they evidently do not of themselves include all the parts in a train of reasoning, and are distinguished by this peculiarity, that their office, in a great measure, is to connect together other subordinate parts in the train. In the combinations of numbers, and in the various applications of demonstrative reasoning, the relations of **PROPORTION** and the relations of **IDENTITY** and **DIVERSITY**, (otherwise called of **AGREEMENT** and **DISAGREEMENT**,) find a conspicuous place. Moral reasoning embraces all kinds of relations, those of degree,

time, place, fitness and unfitness, possession, and cause and effect, as well of agreement and disagreement, and of proportion. Relative feelings, sometimes of one kind and sometimes of another, continually unfold themselves, as the mind advances in an argument.

Although in reasoning there are elements besides feelings of relation, it is evident that it cannot advance independently of their aid. Facts may be accumulated, having close and decisive relations to the points to be proved, but they can never be so bound together as to result in any conclusion, without a perception or feeling of those relations. So that in some respects, the senses, consciousness, original suggestion, memory, testimony, &c, may be regarded as the handmaids of relative suggestion; the former furnishing the facts, and the latter rendering them available.

CHAPTER FIFTH.

MEMORY.

§.338. *Internal knowledge not limited in its origin to one source or one power.*

HOWEVER it may be regarded as a trite remark, that the memory has an intimate connection with the origin of knowledge, it probably is an indisputable one ; although some may see reason for annexing the qualification, that it is less directly a source of ideas in itself, than in its various connections with other mental susceptibilities. We cannot form abstract notions, independently of the aid of the memory ; we can neither exercise the power of reasoning nor of imagination without it ; it may even be considered as implied in, or at least essential to the notion of personal identity. And how is it possible, therefore, not to regard it as, either directly or indirectly, one of the sources of internal knowledge ?—The ways, in which knowledge is let into the mind, are more numerous, than would probably be supposed on a slight or cursory inspection ; and it befits us, therefore, to be cautious of limiting its growth and expansion to one cause, to any fixed and exclusive mode of action, and to any single combination of circumstances. Such a limitation would seem to imply a disregard of the general experience on the subject, and a forgetfulness also, that the human soul is the result of divine workmanship, that its existence is beyond the direct cognizance of the senses, that it sustains a multitude of re-

lations, is controlled by uncounted influences, and is susceptible of unlimited developement.

So far, therefore, from saying with Mr. Locke, that consciousness is the only source of internal knowledge, (if such be truly his doctrine, as it is generally understood to be,) we should not only add the sources of primitive and relative suggestion, but should increase the number with every inward susceptibility, and with every specific diversity of interior mental action, the memory, reasoning, imagination, &c. These are all sources of new ideas. But in proceeding to consider them, it is proper to remark, that our attention will be more taken up with the faculties themselves and their action, than with their immediate results on the increase of knowledge. And accordingly, in next proceeding to investigate the memory, we wish to know what the memory is, its diversified character in different individuals, the causes of this diversity, the means of improving it, &c.

§. 339. *Explanations in respect to the faculty of memory.*

MEMORY is that power or susceptibility of the mind, from which arise those conceptions, which are modified by the relation of past time. It is not a simple, but complex state of the intellectual principle, implying, (1) a conception of the object, (2) the relation of priority in its existence. That is, we not only have a conception of the object, but this conception is attended with the conviction, that it underwent the examination of our senses, or was perceived by us at some former period.

When we imagine, that we stand in the midst of a forest, or on the top of a mountain, but remain safe all the while at our own fireside, these pleasing ideas of woods, and of skies painted over us, and of plains under our feet, are mere conceptions. But when with these insulated conceptions, we connect the relation of time; and they gleam upon our souls, as the woods, plains, and mountains of our youthful days; then those intellectual states, which were before mere conceptions, become REMEMBRANCES. And the susceptibility, which the mind possesses of these latter complex states, is what usually goes under the name of the power or faculty of MEMORY.

§. 340. *Of differences in the strength of memory.*

The susceptibility of remembrances is the common privilege of all, and, generally speaking, it is possessed in nearly equal degrees. To each one there is given a sufficient readiness in this respect ; his ability to remember is such, as to answer all the ordinary purposes of life. But, although there is in general a nearly equal distribution of this power, we find a few instances of great weakness, and other instances of great strength of memory.

It is related of the Roman orator, Hortensius, by Seneca, that, after sitting a whole day at a public sale, he gave an account from memory, in the evening, of all things sold, with the prices and the names of the purchasers, and that this account, when compared with what had been taken in writing by a notary, was found to be exact in every particular.

The following is an instance of strength of memory somewhat remarkable.—An Englishman, at a certain time, came to Frederic the Great of Prussia, for the express purpose of giving him an exhibition of his power of recollection. Frederic sent for Voltaire, who read to his majesty a pretty long poem, which he had just finished. The Englishman was present, and was in such a position, that he could hear every word of the poem ; but was concealed from Voltaire's notice. After the reading of the poem was finished, Frederic observed to the author, that the production could not be an original one ; as there was a foreign gentleman present, who could recite every word of it. Voltaire listened with amazement to the stranger, as he repeated, word for word, the poem, which he had been at so much pains in composing ; and giving way to a momentary freak of passion, he tore the manuscript in pieces. A statement, being made to him of the circumstances, mitigated his anger, and he was very willing to do penance for the suddenness of his passion by copying down the work from a second repetition of it by the stranger, who was able to go through with it, as before.

A great number of instances of this description are

world. Still the speaker uttered no falsehood, because he spoke of the portrait, (and was so understood to speak of it,) in relation to the ship and particularly the cabin ; and not in relation to the parts of the world, which the ship had visited.—Such instances show that place is relative.

Hence we may clearly have an idea of the place or position of all the different parts of the universe, considered separately, because they may be compared with other parts ; although we are unable to form any idea of the place or position of the universe considered as a whole, because we have then no other body, with which we can compare it. If it were possible for us to know all worlds and things at once, to comprehend the universe with a glance, we could not assert, with all our knowledge of it, that it is here, or there, or yonder, or tell, where it would be.

But if place express a relative notion, then it follows, that all words, which involve or imply the place or position of an object, are of a similar character. Such are the words, *high and low, superiour and inferiour*, (when used in respect to the position of objects,) *near and distant, above and beneath, further, nearer, hither, yonder, here, there, where, beyond, within, around, without, and the like.*

§. 332. (VI.) *Of relations of time.*

Another source of relative perceptions or feelings is **TIME**. Time holds nearly the same relation to duration, as position does to space. The position or place of objects is but space marked out and limited ; time, in like manner, is duration, set off into distinct periods ; and as our notions of the place of bodies are relative, so also are our conceptions of events considered as happening in time. It is true, that the notions of duration and space are in themselves original and absolute, but when they are in any way limited, and events are thereby contemplated in reference to them under the new forms of place and time, certain new conceptions arise, which are relative.

All time is contemplated under the aspects of past, present, or future. We are able chiefly in consequence of the

revolutions of the heavenly bodies, to form a distinct notion of portions of time, a day, a month, a year, &c ; we can contemplate events, not only as existing at present, but as future or past. But always when we think or speak of events in time, (in other words when we speak of the *date* of events,) there is a comparison, and a feeling of relation.

What, therefore, is the import of our language, when we say, the independence of the North American colonies was declared, July 4th, 1776.—The meaning of these expressions may be thus illustrated. We assume the present year, 1830, as a given period and reckon back to the year, *one*, which coincides with the birth of our Saviour ; then the year, 1776, expresses the distance between these two extremes, viz. one, and eighteen hundred, thirty. This seems to be all we learn, when we say, the Independence of the United States was declared at the period above mentioned.

We mean the same thing, and convey the same idea, whether we say that the Saviour was born in the year, *ONE*, of the Christian era, or, in the year, 4004, from the creation of the world. But, in the last case, the year, 4004, expresses the distance between these two extremes, viz, the beginning of the world, and the present time ; while, in the first instance, the event itself forms the beginning of the series.—So that all dates appear to be properly classed under ideas of relation ; and also all names whatever, which are, in any way, expressive of the time of events, as a second, a minute, day, week, hour, month, year, cycle, yesterday, to-morrow, to-day, &c.

§. 333. (VII.) *Of relations of possession.*

Another class of relations may be called relations of *possession*.—Every one knows, that not unfrequently, in his examination of objects, there arises a new feeling, which is distinct from, and independent of the mere conceptions of the objects themselves ; and which, as it differs from other feelings of relation, may be termed the relation of possession, or belonging to. This is one of the earliest feelings, which human beings exercise. When we see the

small child grasping its top and rattle with joy, and disputing the claims of another to a share in them, we may know that he has formed the notion of possession. It is not only formed in early life, but experience fully shows, that it loses neither activity nor strength by the lapse of years.

The application of relative perception in this particular form is abundantly extensive ; and we find here a fruitful source of words. The whole class of possessive pronouns, which are to be found in all languages, have their origin here ; such as *MINE, THINE, YOUR, HIS, HER, &c.* The relation of possession is embodied also in the Genitive case of the Greeks, Latins, Germans, and whatever other languages express relations in the same way ; in the construct state of nouns in the Hebrew and the other cognate dialects ; and in the preposition *OF*, which is the substitute for the genitive termination in English, and the articles *DE, DU, DE'L, and DE LA* in French.

The verbs *TO BE* in English, *ESSE* in Latin, *ETRE* in French, (and the same may undoubtedly be said of the corresponding verb of existence in all languages,) are often employed to express the relation of possession or belonging to. To say that the rose is red or the orange yellow is as much as to say, that the qualities of yellowness and redness are the possession of, or belong to the rose and orange. But it will be observed, that the relation is not indicated by the name of the subject, nor by the epithet expressive of its quality, but by the verb, which connects the subject and predicate. And similar remarks will apply to many other verbs.

This class of relations is involved in many complex terms, which imply definite qualities and affections of mind, as friend, enemy, lover, hater, adorer, worshipper. These terms not only indicate certain individuals, to whom they are applied, but assert the existence of certain mental affections as their characteristics, and as belonging to them.

§. 334. (VIII.) *Of relations of cause and effect.*

There are relations also of Cause and Effect. We will

not delay here to explain the origin of the notions of cause and effect any further than to say, that the notion of cause, as it first exists in the mind, includes nothing more than invariable antecedence. When the antecedence to the event, or the sequence of whatever kind, is our own volition, we have the new idea of power. The idea of invariable antecedence, therefore, which of course supposes some sequence, when it is combined with that of power, constitutes the full notion of cause. When the sequence is found invariably to follow, and its existence cannot be ascribed to any thing else, it is called the **EFFECT**.

Cause and effect, therefore, have certainly a relation to each other; it is thus that they exist in the view of the mind and in the nature of things, however true it may be, that men are unable to trace any physical connection between them. We cannot conceive of a cause, if we exclude from the list of our ideas the correlative notion of effect, nor, on the other hand, do we call any thing an effect without a reference to some antecedent. These two notions, therefore, involve or imply the existence of each other; that is, are relative.

If, in our notice of outward objects, we examine particular instances of cause and effect, we shall discover grounds of the correctness of this view. No one is ignorant, that men usually give the name of events, of occurrences, or facts, to those things, which from time to time fall under their notice, when they are considered in themselves. They are the mere facts, the mere events, and nothing more. But when, in the course of their further experience, such events are found to have certain invariable forerunners, they cease to apply these terms, and call them, in reference to their antecedents, **EFFECTS**. And in like manner the antecedents are called **CAUSES**, not in themselves considered, but in reference to what invariably comes after.—In this explanation it is obviously unnecessary, (independently of what has already been said on the subject,) to take into consideration what we understand by Power, which we know and feel to be scattered through the universe; showing itself not only in the

movements and efforts of men, but in every blooming flower, and twinkling star, and in all the works of nature, without which there can be neither cause nor effect, neither antecedence nor sequence, neither strength of harmony nor stability of action.

§. 335. *Instances of complex terms involving the relation of cause and effect.*

The simple relative feeling of cause and effect can of course only exist in such cases of cause and effect as come within the knowledge and cognizance of the mind. This simple feeling, like most other simple states of mind, has but one name, (viz. that of cause and effect,) although arising on innumerable occasions. The relation, however, is embodied in a multitude of names which are expressive, of complex objects, such as printer, sculptor, warrior, poet, manufacturer, painter, &c.

This may be thus illustrated. When we look at any interesting piece of statuary, the sight of it naturally suggests its author. But when our mind is thus directed from the statue to the sculptor, it is evident that we do not think of him as we do of a thousand others, but we combine with the conception of the individual a reference to what he has done. We unite with the mere complex notion of man that of a cause, and this combination evidently alters its character, making it relative instead of absolute.

In like manner when we look at a fine portrait or historical painting, we are naturally reminded of the artist, whose ingenuity has been displayed in its proportions and colouring. But the word painter, which we apply to him, expresses not merely the man, but comprises the additional notion of the relation of cause, which he holds to the interesting picture before us.

§. 336. *Remarks on instituted or conventional relations.*

Perhaps we may be thought not to have completed this subject, without remarking, that there are certain complex terms, expressive of what Mr. Locke calls INSTITUTED or CONVENTIONAL relations. As the epithets indicate, which

that period. The newspapers, which were printed during the period mentioned, were read with interest, and afforded him a great deal of amusement, being perfectly new.—Thucydides, in his account of the plague of Athens, makes mention of some persons, who survived that disease ; but their bodily sufferings had affected their mental constitution, so that they had no recollection of their own former history, had forgotten their friends, and every thing else.

From many instances of this kind, and from others, which go to prove, that the state of the mind, on the other hand, often has a very perceptible effect on the bodily functions, it may justly be inferred, that there is a connection existing between the mind and the body, and that a reciprocal influence is exercised. But what that precise connection is ; whether it be limited, on the part of the body, to the brain ; on what it depends ; in what ways it is modified ; are inquiries, which cannot be satisfactorily answered at present, whatever hypothesis may be proposed. Why a fever, or an attack of apoplexy, or a removal of a part of the brain, or an inordinate pressure of it, which are effects on the body, should affect the mind, a spiritual substance, which is supposed to be essentially different from matter, no one is able to say.—The fact, however, that such a reciprocal connection exists, suggests a reason for a due degree of attention to the physical system. The importance of a healthy and vigorous constitution of the body, as being very nearly connected with a corresponding health and vigour of the intellectual principle, should ever be remembered by those in the pursuit of knowledge.

§. 344. *Memory of the uneducated.*

There is a peculiarity in the memories of uneducated people, of mechanics, farmers, day-labourers, and of all others, who, from the pressure of their particular callings, may have had but little means of mental culture. This peculiarity is seen in their great readiness in the recollection of places, times, arrangements in dress and in buildings, local incidents, &c. In their narrations they will be found to

specify the time of events ; not only the year, but the month, and day, and in their description of persons and places are not less particular. This trait in the mental character of this class of people seems to have arrested the notice of Shakspeare.

Mrs. Quickly, in reminding Sir John Falstaff of his promise of marriage, discovers her readiness of recollection in the specification of the great variety of circumstances, under which the promise was made.—*Thou didst swear to me on a parcel-gilt goblet, sitting in my Dolphin chamber, at the round table, by a sea-coal fire, on Wednesday in Whitsun week, when the prince broke thy head for likening him to a singing man of Windsor, &c.*—The coachman in Cornelius Scriblerus gives an account of what he had seen in Bear-garden ;—*Two men fought a prize ; one was a fair man, a sergeant in the guards ; the other black, a butcher ; the serjeant had red trousers, the butcher blue ; they fought upon a stage about four o'clock, and the serjeant wounded the butcher in the leg.*

The explanation of this peculiarity of memory in common people is this.—It will be kept in mind, that our remembrances are merely conceptions, modified by relations of past time. Removing then the modification of past time, and the remaining element of our remembrances will be conceptions. Our conceptions cannot be called up by a mere voluntary effort, because to will the existence of a conception necessarily implies the actual existence of the conception already in the mind. Our conceptions, therefore, arise in the mind on the principles of association. We come, then, directly to the fact which explains that peculiarity or characteristic of memory, of which we are speaking.

The knowledge, which is possessed by persons of very small education, will be found to be connected together by the most obvious and easy principles of association ; for instance, contiguity in place and time. These people have been very much, we may say chiefly, in the practice of associating those things, which happened at the same time, or were proximate in position. It may be thought, that mere time and place are very unimportant relations,

but however that may be, they most strongly seize the notice of persons of small education; and by means of them, their overflowing multitude of remembrances is kept in place. Having by almost constant exercise greatly strengthened the tendency to those associations, which exist in consequence of mere contiguity, they can very readily tell you, not only the precise *place*, where any thing has happened, but almost every thing, which has happened in the immediate neighborhood; not only the *time*, when the event occurred, but many other things, which occurred about the same period. (See in connection with these remarks, §. 114.)

§. 345. *Memory of men of philosophic minds.*

From speaking of the power of remembrance in the uneducated, we naturally turn to persons of a reflecting, and philosophic mental character. It has often been remarked of such, that they discover a want of readiness of recollection. The servant in the family of the philosopher will be likely to know much more about the fields, and fences, and cattle of the neighbours; will be more minutely acquainted with their individual dress, and manners, and habits, than the philosopher himself. More than this, he has an aptness, an ability at remembering things of this nature, which his philosophic master evidently does not possess.—Again, we suppose a battle to have been fought; persons of limited intellectual culture will tell you the precise day of the month, the exact number of troops, the names of the regiments, the amount of killed and wounded, and many trifling incidents of individuals, whether solemn or ludicrous, which are fitted subsequently to enliven the narrations of the fireside. But the philosopher, who has read the same accounts, does not remember these particulars, and finds it a very difficult thing to do it. But we perceive, that his mind has been profitably employed in reflections on the causes of the battle, on various striking developements of human character in its heat and bustle, and on its effects upon the happiness or misery of families and nations.

lations, is controlled by uncounted influences, and is susceptible of unlimited developement.

So far, therefore, from saying with Mr. Locke, that consciousness is the only source of internal knowledge, (if such be truly his doctrine, as it is generally understood to be,) we should not only add the sources of primitive and relative suggestion, but should increase the number with every inward susceptibility, and with every specific diversity of interior mental action, the memory, reasoning, imagination, &c. These are all sources of new ideas. But in proceeding to consider them, it is proper to remark, that our attention will be more taken up with the faculties themselves and their action, than with their immediate results on the increase of knowledge. And accordingly, in next proceeding to investigate the memory, we wish to know what the memory is, its diversified character in different individuals, the causes of this diversity, the means of improving it, &c.

§. 339. *Explanations in respect to the faculty of memory.*

MEMORY is that power or susceptibility of the mind, from which arise those conceptions, which are modified by the relation of past time. It is not a simple, but complex state of the intellectual principle, implying, (1) a conception of the object, (2) the relation of priority in its existence. That is, we not only have a conception of the object, but this conception is attended with the conviction, that it underwent the examination of our senses, or was perceived by us at some former period.

When we imagine, that we stand in the midst of a forest, or on the top of a mountain, but remain safe all the while at our own fireside, these pleasing ideas of woods, and of skies painted over us, and of plains under our feet, are mere conceptions. But when with these insulated conceptions, we connect the relation of time; and they gleam upon our souls, as the woods, plains, and mountains of our youthful days; then those intellectual states, which were before mere conceptions, become REMEMBRANCES. And the susceptibility, which the mind possesses of these latter complex states, is what usually goes under the name of the power or faculty of MEMORY.

§. 340. *Of differences in the strength of memory.*

The susceptibility of remembrances is the common privilege of all, and, generally speaking, it is possessed in nearly equal degrees. To each one there is given a sufficient readiness in this respect ; his ability to remember is such, as to answer all the ordinary purposes of life. But, although there is in general a nearly equal distribution of this power, we find a few instances of great weakness, and other instances of great strength of memory.

It is related of the Roman orator, Hortensius, by Seneca, that, after sitting a whole day at a public sale, he gave an account from memory, in the evening, of all things sold, with the prices and the names of the purchasers, and that this account, when compared with what had been taken in writing by a notary, was found to be exact in every particular.

The following is an instance of strength of memory somewhat remarkable.—An Englishman, at a certain time, came to Frederic the Great of Prussia, for the express purpose of giving him an exhibition of his power of recollection. Frederic sent for Voltaire, who read to his majesty a pretty long poem, which he had just finished. The Englishman was present, and was in such a position, that he could hear every word of the poem ; but was concealed from Voltaire's notice. After the reading of the poem was finished, Frederic observed to the author, that the production could not be an original one ; as there was a foreign gentleman present, who could recite every word of it. Voltaire listened with amazement to the stranger, as he repeated, word for word, the poem, which he had been at so much pains in composing ; and giving way to a momentary freak of passion, he tore the manuscript in pieces. A statement, being made to him of the circumstances, mitigated his anger, and he was very willing to do penance for the suddenness of his passion by copying down the work from a second repetition of it by the stranger, who was able to go through with it, as before.

A great number of instances of this description are

calculation, he will appear more slow and hesitating, than if he followed the received rules of arithmetic without reflection or reasoning.

Something of the same kind happens every day in conversation. By far the greater part of the opinions we announce in it, are not the immediate result of reasoning on the spot, but have been previously formed in the closet, or perhaps have been adopted implicitly on the authority of others. The promptitude, therefore, with which a man decides in ordinary discourse, is not a certain test of the quickness of his apprehension ; as it may perhaps arise from those uncommon efforts to furnish the memory with acquired knowledge, by which men of slow parts endeavour to compensate for their want of invention ; while, on the other hand, it is possible that a consciousness of originality may give rise to a manner apparently embarrassed, by leading the person who feels it, to trust too much to extempore exertions.”*

§. 347. *Of the memory of the aged.*

A defect of memory is often noticed in persons, who are advanced in years. Very few retain those powers of recollection, which they possessed in early days. “Age, says Ossian, is now on my tongue, and my soul has failed ; memory fails on my mind.”—The failure of this mental susceptibility in the aged seems to be owing to two causes, viz. the impaired state of the organs of perception, and a defect of attention.

* In the foregoing observations it is not meant to be implied that originality of genius is incompatible with a ready recollection of acquired knowledge; but only that it has a tendency unfavourable to it, and that more time and practice will commonly be necessary to familiarize the mind of a man of invention to the ideas of others, or even to the conclusions of his own understanding, than are requisite in ordinary cases. Habits of literary conversation, and still more, habits of extempore discussion in a popular assembly, are peculiarly useful in giving us a ready and practical command of our knowledge. There is much good sense in the following aphorism of Bacon: “Reading makes a full man, writing a correct man, and speaking a ready man.” See a commentary on this aphorism in one of the Numbers of the Adventurer.

(1) *Their organs of external perception are impaired.*

We find it difficult, in consequence of the failure of their sense of hearing, to converse with people, advanced in years, and it requires a great effort, both on our part and theirs, to make them understand what we say. The most conclusive arguments, and flashes of wit, and rich strains of music have in a great measure ceased to excite in them any interest.—There is a like failure of the sense of seeing also. They no longer take pleasure in the delightful aspects of creation. The waving forest, and the gay beams of the sun, although they have not ceased to have charms for others, have but little, or none for them.

All the other senses fail of their wonted operation in the same way. In the language of an old Roman, when he wished to excuse himself from the acceptance of a public office, they are but the name and shadow of what they once were; (*me jam non eundem, sed umbram nomenque Publii Licinii relictum videtis; vires corporis affectæ, sensus oculorum atque aurium hebetes, memoria labat, vigor animi obtusus.*) The natural and necessary consequence of this state of things is, that the ideas which are let in by the senses, make but a very feeble impression, and are almost immediately erased from the mind.

(2) *The second cause of the weakness of memory, of which old people complain, is a defect in attention.*—That mental exercise, to which we give the name of attention, always implies desire, an emotion of interest; and without an emotion of this description, it cannot exist. But the world, (including in the term what is beautiful in nature, and what is important in the duties and callings of life,) has at last ceased to excite the emotions, which it formerly awakened. The aged are like the prisoner, released in the period of the French revolution, from the Bastille; they find themselves, as it were, in a new creation, which passes before them with great indistinctness, and with which they feel but little sympathy. And why should it be thought unnatural, that they should neglect in some measure that scene of things, which has already learnt to forget and to neglect them? As their organs of external percep-

tion have failed them, and there has also been a defect of attention, the memory, as a natural consequence, has become powerless and broken.

It should, however, be remarked here, that, notwithstanding what has been said, aged people often recal, with great readiness and precision, the feelings and the incidents of their youth. As when a man, who has been greatly prospered, but who at last meets with sudden and disastrous reverses of fortune, finds, in this new state of things, his obsequious attendants fleeing away and turning against him, while only a few early friends remain unmoved in evil and good report ; so early feelings and early associations appear to cling with a faithful fondness to the shattered intellects of the aged. The old soldier, who had a share in the American Revolution, will sit down by his fireside and describe with great particularity the scenes, where he toiled and bled, and yet be quite unable to give an account of the incidents of the preceding week.

The explanation of this trait in the mental aspects of the aged seems to be this.—As a general statement, our early feelings and our early associations are the strongest. That they should be so is not strange, since we have then entered on a state of things, which, in its essential features, is new, and which, in all its diversities of duty, and pleasure, and danger, attracts, and excites us by continual novelty. Who can forget the plains where he wandered in early life ? Who can erase from his recollection the associates of those days of wonder, activity, and hope ? Who can obliterate from his heart his toils, and his sufferings, and his joys, all of which assumed a peculiar emphasis and importance, being connected with future prospects, the adversities and the successes of after life ?—These things remain, while others vanish. Such feelings, so deeply fixed in the mind, and bound together and made permanent by the strength of a mutual association, are frequently recalled ; they recur to the soul in the activity and bustle of life, and in those more favoured moments, when it is given up to silent and solemn meditations. The effect of this frequent recurrence can easily be imagined.

The early impressions, which are the subjects of such recurrence become in time, if one may be allowed the expression, a part of the mind itself; they seem to be woven into its existence. Hence old men, who have no eye and no hearing for the events, that are passing around them, repeat, with the greatest animation, the stories of scenes, and actions, and friendships of fifty years ago.

§. 348. *Memory of persons of a rich imagination.*

It is a remark of Dr. Watts, that a fine genius is often found to have but a feeble memory. By a fine genius is probably understood what we commonly mean in a person of a rich imagination; that is one who is furnished with a rich store of images, has readiness in the perception of their congruity or incongruity, and such view and of course has great power in the formation of various new combinations.

Such a person finds a pleasure in mental images. He is continually and happily entertained with his own pictures, which his imagination creates. He is not so much entertained with external events, many facts, which are particularly interesting and interesting to others, pass by him unregarded and are soon forgotten, as if they had never been. I have been a person of this description, and have observed the general principles of the human mind, and the balance of intellectual powers, and the manner of remembering dates, times, places, and the manner of remembering facts of every day.

Weakness of memory in persons of a rich imagination is discovered also in their reading of books. The manner of it seems to be a sort of indifference, and a sort of indolence. Conscious of their own weakness, they are not disposed to peruse books in a hasty and careless manner, but without due attention. The result of this careless manner is, in respect to events and the circumstances of history, as they are but imperfectly known at first, and are very easily forgotten. This will not appear strange, in connection with the remark at § 346, in the connection of the mind.

tween memory and attention. The weakness of memory, therefore, in persons of rich imagination is not constitutional and permanent, but a matter of mere accident ; and, for this reason, the more discreditable. When such persons have habitually taken an interest in the common affairs of life, they are found to remember their details, however unpoetical ; and in their reading of authors nothing seems to be wanting, but interest and attention, in order to secure them from the reproach, under which they are thought to labour.

§. 349. *On the compatibility of strong memory and good judgment.*

By JUDGMENTS we understand here nothing more than the opinions, which we form in view of evidence ; in other words, they are the results or conclusions of moral reasoning. By a person of good judgment, we accordingly mean one, who examines subjects with caution, and whose results, founded on such examination, for the most part prove correct. That persons may possess, in a very high degree, the susceptibility of memory, and still be incapable of correct moral reasoning, or of exhibiting any other indications of a well judging mind, is a fact well known. There have even been idiots, who certainly could present no claims to the character of judging well, that have, nevertheless, been remarkable for memory. Such are, indeed, instances of an extreme kind ;—but there are not wanting many other cases, where strong memories have been found united with feeble judgment. On this fact it may be remarked, as follows.

The connection between a strong memory and a weak judgment, it may be said without any hesitation, is not necessary, but merely accidental ; that is, is not the constitution of nature, but in general the result of circumstances. As it is an accidental state of things, and not any thing essential and permanent in our mental structure, we must look for its appropriate cause in erroneous mental discipline.—It may well be supposed, that those, who possess strong memories, are not insensible of their excel-

lence in this respect ; and the approbation, which they have received in consequence of it, encourages them to treasure up a dry collection of all facts, which will, in any way, bear repetition. Dates, genealogies, local incidents, traditional anecdotes, are all seized, and retained with peculiar avidity. But too much intent upon the mere dates and names of things, such persons fail to inquire into their true nature ; they neglect other and more important forms of mental discipline ; and thus justly sustain the reputation of possessing a showy, rather than discriminating and sound knowledge. In instances of this description, the relations, by which the suggested trains of thought are associated, are the more slight and obvious ones, such as of time, place, &c. But there are some exceptions to this unwise course ; individuals may be found, who, with an astonishing ability to recal the most unimportant incidents of daily occurrence, as well as the dry details of historical facts, combine the far more enviable ability of discriminating the true differences of things, of combining means for the attainment of ends, and of rightly estimating evidence in its various applications ; which are among the characteristics of men of sound judgment.

§. 350. *Intentional memory or recollection.*

The definition of MEMORY, which has been given, is, that it is the power or susceptibility of the mind, from which arise those conceptions, which are modified by the relation of past time. This definition necessarily resolves memory in good part into association. It is, therefore, to be here observed, that our trains of associated thought are not voluntary ; that is, are not directly under the control of the WILL. They come and depart, without it being possible for us to exercise any thing more, than an indirect government over them. (See §. 234.) It follows from these facts, that our remembrances also are not voluntary ; or, in other words, it is impossible for us to remember in consequence of merely choosing to remember. To will or to choose to remember any thing implies, that the thing in question is already in the mind ; and hence there

is not only an impossibility resulting from the nature of the mind, but also an absurdity, in the idea of calling up thought by volition. Our chief power, therefore, in quickening and strengthening the memory, will be found to consist in our skill in applying and modifying the various principles or laws of association. And this brings us to a consideration of what is called **INTENTIONAL MEMORY** or **RECOLLECTION** ; a subject, which was partly illustrated in the section above referred to.

Whenever we put forth an exercise of intentional memory, or make a formal attempt to remember some circumstance, it is evident, that the event in general, of which the circumstance when recalled will be found to be a part, must have previously been an object of attention. That is, we remember the great outlines of some story, but cannot, in the first instance, give a complete account of it, which we wish to do. We make an effort to recal the circumstances not remembered in two ways.—We may, in the *first* place, form different suppositions, and see, which agrees best with the general outlines ; the general features or outlines of the subject being detained before us, with a considerable degree of permanency, by means of some feeling of desire or interest. This method of restoring thoughts is rather an inference of reasoning, than a genuine exercise of memory.

We may, in the *second* place, merely delay upon those thoughts, which we already hold possession of ; and revolve them in our minds ; until, aided by some principle of association, we are able to lay hold of the particular ideas, for which we were searching. Thus, when we endeavour to recite what we had previously committed to memory, but are at a loss for a particular passage ; we repeat, a number of times, the concluding words of the preceding sentence. In this way, the sentence, which was forgotten, is very frequently recalled.

§. 351. *Instance illustrative of the preceding.*

We had occasion, in a former section, to mention the case of an individual, who, in consequence of an attack of

apoplexy, forgot all the transactions of the four years immediately preceding. It is further to be observed here, that the same individual recovered by degrees all he had lost ; so as after a while to have nearly or quite as full a remembrance of that period, as others. In this instance the power of the principles of association appears to have been at first completely prostrated by the disease, without any prospect of their being again brought into action, except by some assistance afforded them. This assistance, no doubt, was reading and conversation. By reading old newspapers and by conversation, he, from time to time, fell upon ideas, which he had not only been possessed of before, but which had been associated with other ideas, forming originally distinct and condensed trains of thought. And thus whole series were restored.—Other series again were recovered by applying the methods of INTENTIONAL RECOLLECTION ; that is, by forming suppositions and comparing them with the ideas already recovered, or by continually revolving in mind such trains as were restored, and thus rousing up others. Such, we can hardly doubt to have been, in the main, the process, by which the person, of whom we are speaking, recovered the knowledge he had lost.

These views, in addition to what has now been said, may be illustrated also by what we sometimes observe in old men. Question them as to the events of early life ; and at times they will be unable to give any answer whatever. But whenever you mention some prominent incident of their young days, or perhaps some friend, on whom many associations have gathered, it will often be found, that their memory revives, and that they are able to state many things, in respect to which they were previously silent.

§. 352. *Marks of a good memory.*

The great purpose, to which the faculty of memory is subservient, is, to enable us to retain the knowledge, which we have from our experiences, for future use. The prominent marks of a good memory, therefore, are these two,

viz, Tenacity in retaining ideas, and readiness in bringing them forward on necessary occasions.

FIRST ; of tenacity or power of retaining ideas.—The impressions, which are made on some minds, are durable. They are like channels worn away in stone, and names engraven in monumental marble, which defy the operation of the ordinary causes of decay, and withstand even the defacing touch of time. But other memories, which at first seemed to grasp as much, are destitute of this power of retention. The inscriptions, made upon them, are like characters written on the sand, which the first breath of wind covers over, and like figures on a bank of snow, which the sun smiles upon, and melts. The inferiority of the latter description of memory to the former must be obvious ; so much so as to solicit no comment. A memory, whose power of retaining is greatly diminished, of course loses a great part of its value.

SECOND ; of readiness or facility in bringing forward what is remembered.—Some persons, who cannot be supposed to be deficient in tenacity of remembrance, appear to fail, in a confident and prompt command of what they remember. Some mistake has been committed in the arrangement of their knowledge ; there has been some defect in the mental discipline ; or for some other cause, whatever it may be, they often discover perplexity, and remember, as if they remembered not. Their knowledge, although they have it in possession, does not come promptly forth at their bidding, like the soldiers of the believing Centurion, who said to one, Go, and he goeth, and to another, Come, and he cometh. It is the opposite ; calls without answers, requisitions without obedience.

It is true, that a perfect readiness of memory cannot rationally be expected in men of philosophic minds, who pay no attention to particular facts, except for the purpose of deducing from them general principles. But it is no less true, that when this want of readiness is such as to cause a considerable degree of perplexity, it must be regarded a great mental defect. And for the same reason a prompt command of knowledge is to be regarded a mental excellence.

§. 353. *Importance of improving the memory.*

In whatever point of view the memory be contemplated, it must be admitted, that it is a faculty always securing to us inestimable benefits. In addition to the direct suggestions, which are connected with its exercise, it should be remembered, that there can be no comparison of our ideas and no abstraction without it, and that hence it is indirectly the foundation of a great portion of our knowledge. It is very evident, that without its assistance the human mind would necessarily be sunk into the lowest form of idiocy.

If this statement be correct, it is an obvious consequence, that the faculty is one requiring all our care and attention ; and that it should be improved in whatever respects it is susceptible of improvement. To this end certain rules will be laid down. But before enumerating them in their order, we wish to remark, that it is unwise to attempt remembering every thing. A memory thus loaded may be compared to what Milton calls the Christian Fathers, a *drag-net*, which, (he says,) comes floating down to us on the stream of time, and bearing articles of most disproportionate value, shells and shell-fish, jewels and pebbles, sticks and straws, sea-weeds and mud. It is important, therefore, to distinguish things aright ; and in the multitude of particulars of greater and less value, to retain those only, which are of some real worth.

§. 354. *Directions or rules for the improvement of the memory.*

For the purpose of securing the most efficient action of this inestimable faculty, and particularly that tenacity and readiness, which have been spoken of, the following directions may be found worthy of attention.

(I.)—*Never be satisfied with a partial or half acquaintance with things.*—There is no less a tendency to intellectual, than to bodily inactivity ; students, in order to avoid intellectual toil, are too much inclined to pass on in a hurried and careless manner. This is injurious to the memory. “Nothing, (says Dugald Stewart,) has such a tendency

to weaken, not only the powers of invention, but the intellectual powers in general, as a habit of extensive and various reading without reflection." Always make it a rule fully to understand what is gone over. Those, who are determined to grapple with the subject in hand, whatever may be its nature, and to become master of it, soon feel a great interest ; truths, which were at first obscure become clear and familiar. The consequence of this increased clearness and interest is an increase of attention ; and the natural result of this is, that the truths are very strongly fixed in the memory. A perpetual vacillation between the honours and toils of science is a species of "halting between two opinions," that is not less injurious in learning, than in religion.

(II,.)—*We are to refer our knowledge, as much as possible, to general principles.*——To refer our knowledge to general principles is to classify it ; and this is perhaps the best mode of classification. If a lawyer or merchant were to throw all their papers together promiscuously, they could not calculate on much readiness in finding what they might at any time want. If a man of letters were to record in a common-place book all the ideas and facts, which occurred to him, without any method, he would experience the greatest difficulty in applying them to use. It is the same with a memory, where there is no classification. Whoever fixes upon some general principle, whether political, literary, or philosophical, and collects facts in illustration of it, will find no difficulty in remembering them, however numerous ; when without such general principles the recollection of them would have been extremely burdensome.

(III,.)—*Consider the nature of the study, and make use of those helps, which are thus afforded.*——This rule may be illustrated by the mention of some departments of science. Thus, in acquiring a knowledge of geography, the study is to be pursued, as much as possible, with the aid of good globes, charts, and maps. It requires a great effort of memory, and generally an unsuccessful one, to recollect the relative extent and situation of places, the numerous

physical and political divisions of the earth, from the book. The advantages of studying geography with maps, globes, &c. are two. (1)—The form, relative situation, and extent of countries become, in this case, ideas, or rather conceptions of sight; such conceptions (§. 218.) are very vivid, and are more easily recalled to remembrance, than others.

(2) Our remembrances are assisted by the law of contiguity in place, (§. 114,) which is known to be one of the most efficient aids. When we have once, from having a map or globe before us, formed an acquaintance with the general visible appearance of an island, a gulf, an ocean, or a continent, nothing is more easy than to remember the subordinate divisions or parts. Whenever we have examined, and fixed in our minds the general appearance or outlines of a particular country, we do not easily forget the situation of those countries, which are contiguous.

We find another illustration of this rule in the reading of history.—There is such a multitude of facts in historical writings, that to endeavour to remember them all is fruitless; and if it could be done, would be of very small advantage. Hence, in reading the history of any country, fix upon two or three of the most interesting epochs; make them the subject of particular attention; learn the spirit of the age, and the private life and fortunes of prominent individuals; in a word, study these periods not only as annalists, but as philosophers. When they are thus studied, the mind can hardly fail to retain them; they will be a sort of landmarks; and all the other events in the history of the country, before and afterwards, will naturally arrange themselves in reference to them. The memory will strongly seize the prominent periods, in consequence of the great interest felt in them; and the less important parts of the history of the country will be likely to be retained, so far as is necessary, by the aid of the principle of contiguity, and without giving them great attention.—Further, historical charts or genealogical trees of history are of some assistance for a similar reason, that maps, globes, &c. are in geography.

This rule for strengthening the memory will apply also

to the more abstract sciences——“In every science, says Stewart, (*Elements*, CH. VI, §. 3,) the ideas, about which it is peculiarly conversant, are connected together by some associating principle ; in one science, for instance, by associations founded on the relation of cause and effect ; in another, by the associations founded on the necessary relations of mathematical truths.”

(IV,.)—*The order, in which things are laid up in the memory, should be the order of nature.*—In nature every thing has its appropriate place, connections, and relations. Nothing is insulated, and wholly cut off, as it were, from every thing else ; but whatever exists or takes place falls naturally into its allotted position within the great sphere of creation and events. Hence the rule, that knowledge, as far forth as possible, should exist mentally or subjectively in the same order as the corresponding objective reality exists. The laws of the mind will be found in their operation to act in harmony with the laws of external nature. They are, in some sense, the counterparts of each other. We might illustrate the benefits of the application of this rule by referring to almost any well digested scientific article, historical narration, poem, &c. But perhaps its full import will be more readily understood by an instance of its utter violation.

A person was one day boasting, in the presence of Foote the comedian, of the wonderful facility, with which he could commit any thing to memory, when the modern Aristophanes said he would write down a dozen lines in prose, which he could not commit to memory in as many minutes. The man of great memory accepted the challenge ; a wager was laid, and Foote produced the following.—“So she went into the garden to cut a cabbage-leaf to make an apple pie ; and at the same time a great she-bear, coming up the street, pops its head into the shop. What, no soap ? So he died, and she very imprudently married the barber ; and there were present the Picinitunies, and the Joblillies, and the Garyulies, and the grand Panjandrum himself, with the little round button at the top ; and they all fell to playing catch as catch can, till the gunpowder

ran out of the heels of their boats."—The story adds, that Foote won the wager. And it is very evident, that statements of this description, strictly disregarding the order of nature and events, must defy, if carried to any great length, the strongest memory.

(V.)—The memory may be strengthened by exercise.—Our minds, when left to sloth and inactivity, soon all their vigour; but when they are kept in exercise and after performing what was before them, are loaded with new suggestions, it is not easy to assign limits to their powers. This seems to be a general and ultimate law of our nature. It is applicable equally to every original susceptibility, and to every combination of mental action. In repeated instances we have had occasion to refer to its results both on the body and the mind. The power of perception is found to acquire strength and acuteness by exercise. There are habits of conception and of association as well as of perception; and we shall be able to detect the existence and operation of the same great principle, when we come to speak of reasoning, imagination &c. As this principle applies equally to the memory, we are sure to secure its beneficial results, by practising those suggestions or exercise, on which they are founded.

§. 355. *Of committing to writing as a means of aiding the memory.*

Among other means of aiding the memory, it is often recommended to commit to writing the knowledge, which we acquire. This practice, if not carried too far, so as greatly to supersede the direct exercise of the memory, is attended with certain advantages, which justify an occasional resorting to it.—(1) Often in the course of a person's opportunities of reading and of intercourse with the world, he becomes acquainted with facts, with which he is unwilling to burden his memory, and which he is equally unwilling to lose. Here it is proper to resort to this method, which, at the same time, leaves the memory free for other subjects, and retains what may be found at some

future period important.—(2) In the progress of a person's experience and investigations, he arrives at certain important conclusions; for in literature, and in the departments of science, and in the philosophy of human conduct, there are certain principles to be ascertained, which hold a first rank, and exert their influence on all collateral inquiries. The means or process, by which he arrived at them, is permitted to fade away from the mind, because he has no desire to remember it. But it may often be found desirable to call in the aid of writing in order to prevent the possibility of a like result with those important principles, which he has established with no small labour. These occasional records will not only secure the great truths he has gained; but will furnish land-marks of the gradual developement of the mind, and profitable intimations concerning the laws, by which it is governed.

§. 356. *Of Mnemonics or systems of artificial memory.*

We shall conclude these suggestions, on the subject of aiding and improving the memory, by a remark or two on the method or system of MNEMONICS.

By a system of mnemonics or of artificial memory is meant “a method of connecting in the mind things difficult to be remembered, with things easily remembered, so as to enable it to retain and recollect the former by means of the latter.”——The things easy to be remembered are short and simple verses, or the walls and compartments of a room, or grotesque pictures, and the like. Important facts are to be connected with these, in the expectation, that the former will be remembered because the latter are.

It is no doubt possible to give a temporary aid to the memory by such arbitrary arrangements; by associating our ideas with a set of sounds, places, and images. Such assistance may occasionally be of some advantage to public speakers, and to persons, who are called to remember a large number of insulated facts. But there is reason to fear that the benefit is more than counterbalanced by burdening and distracting the memory with what is allowed-

ly frivolous and perhaps ridiculous. However this may be, it is generally admitted to be the fact, that those systems, that are proposed for use at the present time, are too complicated for plans, which profess to render the acquisition of knowledge more easy. They can never be adopted into general use, unless they are rendered more simple; nor do we apprehend, that a person, who follows the rules for strengthening and applying the memory above laid down, will stand greatly in need of any other helps in recollecting most things, that will be useful and important.

NOTE. Those, who are desirous to see the foregoing topics more fully discussed, are referred to Locke's Essay, BK. II. CH. X; Reid's Essays on the Intellectual Powers, III.; Beattie on the Memory; Helvetius, DE L' ESPRIT, DISC. III, CHS. III, IV.; DE L' HOMME, SECT. II, CH. XI.; Stewart's Elements, Chap. VI.; Brown's Lects. XLI.; Cabanis, Rapports du Physique et du Moral de L' HOMME, *Mem.* IV. §. x.; not to mention other writers on this subject too numerous to be specified.—For an account of Systems of Artificial Memory, see the New Art of Memory on the Principles of M. Gregor von Feinagle, London, 3d ed. 1813.

CHAPTER SIXTH.

DURATION OF MEMORY.

§. 357. *Restoration of thoughts and feelings, supposed to be entirely forgotten.*

Before quitting the subject of memory, there is another point of view, not wholly wanting in interest, in which it is susceptible of being considered ; and that is the permanency or duration of its power to call up its past experiences. It is said to have been an opinion of Lord Bacon, that no thoughts are lost, that they continue virtually to exist, and that the soul possesses within itself laws, which, whenever fully brought into action, will be found capable of producing the prompt and perfect restoration of the collected acts and feelings of its whole past existence.

This opinion, which other able writers have fallen in with, is clearly worthy of examination, especially when we consider, that it has a practical bearing, and involves important moral and religious consequences. Some one will perhaps inquire, is it possible, is it in the nature of things, that we should be able to recall the million of little acts and feelings, which have transpired in the whole course of our lives ? Let such an inquirer be induced to consider, in the first place, that the memory has its fixed laws, in virtue of which the mental exercises are recalled; and that there can be found no direct and satisfactory proof of such laws ever wholly ceasing to exist. That

the operation of those laws appears to be weakened, and is in fact weakened, by lapse of time, is admitted; but while the frequency, promptness, and strength of their action may be diminished in any assignable degree, the laws themselves yet remain. This is the view of the subject, which at first obviously and plainly presents itself; and we may venture to add, is recommended by common experience. ♣

It is known to every one, that thoughts and feelings sometimes unexpectedly recur, which had slumbered in forgetfulness for years. Days and months and years have rolled on; new scenes and situations occupy us; and all we felt and saw and experienced in those former days and years appears to be clothed in impenetrable darkness. But suddenly some unexpected event, the sight of a waterfall, of a forest, of a house, a peculiarly pleasant or gloomy day, a mere change of countenance, a word, almost any thing we can imagine, arouses the soul, and gives a new and vigorous turn to its meditations. At such a moment we are astonished at the novel revelations which are made, the recollections which are called forth, the resurrection of withered hopes and perished sorrows, of scenes and companionships, that seemed to be utterly lost.

“Lulled in the countless chambers of the brain,
 “Our thoughts are linked by many a hidden chain.
 “Awake but one, and lo, what myriads rise!
 “Each stamps its image, as the other flies.

This is perhaps a faint exhibition of that perfect restoration of thought, which Bacon and other philosophic minds have supposed to be possible. But, if the statement be correct, it is undoubtedly one circumstance among others in support of that sentiment, although of subordinate weight.

§. 358. *Mental action quickened by influence on the physical system.*

The ability of the mind to restore its past experiences depends, in some degree, on the state of the physic-

al system. In the preceding chapter it was stated, (and some facts were referred to in proof of it,) that there is a connection existing between the mind and the body, and that a reciprocal influence is exercised. It is undoubtedly true, that the mental action is ordinarily increased or diminished, according as the body is more or less affected. And may not the exercise of the laws of memory be quickened, as well as the action of other powers? While it is admitted, that an influence on the body exerts an influence on the mind, may it not be true, that this general influence sometimes takes the particular shape of exciting the recollection, and of restoring long-past events?

There are various facts, having a bearing on this inquiry, and which seem to show, that such suggestions are not wholly destitute of foundation.

It appears from the statements of persons, who have been on the point of drowning, but have been rescued from that situation, that the operations of their minds were peculiarly quickened. In this wonderful activity of the mental principle, the whole past life, with its thousand minute incidents, has almost simultaneously passed before them, and been viewed as in a mirror. Scenes and situations long gone by, and associates not seen for years, and perhaps buried and dissolved in the grave, came rushing in upon the field of intellectual vision, in all the activity and distinctness of real existence.

If such be the general experience in cases of this kind, it confirms a number of important views; placing beyond doubt, that there is a connection between the mind and body; that the mental operation is susceptible of being quickened; and that such increase of action may be attributable, in part at least, to an influence on the body. The proximate cause of the great acceleration of the intellectual acts, in cases of drowning, appears to be, (as will be found to be the fact in many other similar cases,) an affection of the brain. That is to say; in consequence of the suspension of respiration, the blood is prevented from readily circulating through the lungs, and hence becomes accumulated in the brain. It would seem, that the blood is

never thrown into the brain in unusual quantities, without being attended with unusual mental affections.*

§. 359. *Other instances of quickened mental action and of a restoration of thoughts.*

The doctrine, which has been proposed, that the mental action may be quickened, and that there may be a restoration or remembrance of all former thoughts and feelings, is undoubtedly to be received or rejected in view of facts. The only question in this case as in others is, What is truth? And how are we to arrive at the truth?

If the facts, which have been referred to, be not enough to enable one to form an opinion, there are others of a like tendency, and in a less uncertain form. A powerful disease, while at some times it prostrates the mind, at others imparts to it a more intense action. The following passage from a recent work, (although the cause of the mental excitement, in the instance mentioned in it, is not stated,) may properly be appealed to in this connection.—“Past feelings, even should they be those of our earliest moments of infancy, never cease to be under the influence of the law of association, and they are constantly liable to be renovated, even to the latest period of life, although they may be in so faint a state as not to be the object of consciousness.

It is evident then, that a cause of mental excitement may so act upon a sequence of extremely faint feelings, as to render ideas, of which the mind had long been previously unconscious, vivid objects of consciousness. Thus it is recorded of a female in France, that while she was subjected to such an influence, the memory of the Armorican lan-

*Persons, who have been in a drowning situation, have asserted, that the time, although it was but a few moments, appeared exceedingly long. It might be inquired, whether this circumstance has not a connection with the principle laid down at §. 309. It there appeared, that duration would seem to be greater or less, in proportion to the amount in the succession of thought. If, therefore, in a given time, the mental action be greatly accelerated, that period naturally appears much longer, than the same length of time, when the mental action is less.

guage, which she had lost since she was a child, suddenly returned.”*

§. 360. *Effect on the memory of a severe attack of fever.*

We may add here the following account of the mental affections of an intelligent American traveller. He was travelling in the state of Illinois, and suffered the common lot of visitants from other climates, in being taken down with a bilious fever.—“ I am aware, he remarks, that every sufferer in this way is apt to think his own case extraordinary. My physicians agreed with all who saw me, that my case was so. As very few live to record the issue of a sickness like mine, and as you have requested me, and as I have promised to be particular, I will relate some of the circumstances of this disease. And it is in my view desirable in the bitter agony of such diseases, that more of the symptoms, sensations, and sufferings should be recorded than have been; and that others, in similar predicaments, may know, that some before them have had sufferings like theirs, and have survived them.

I had had a fever before, and had risen and been dressed every day. But in this, with the first day I was prostrated to infantine weakness, and felt with its first attack, that it was a thing very different from what I had yet experienced. Paroxysms of derangement occurred the third day, and this was to me a new state of mind. That state of disease, in which partial derangement is mixed with a consciousness generally sound, and a sensibility prenatally excited, I should suppose the most distressing of all its forms. At the same time that I was unable to recognize my friends, I was informed, *that my memory was more than ordinarily exact & retentive, and that I repeated whole passages in the different languages, which I knew, with entire accuracy. I recited, without losing or misplacing a word, a passage of poetry, which I could not so repeat, after I had recovered my health,*” &c.†

*Hibberts Philosophy of Apparitions, Pt. IV, Ch. 5.

†Flint's Recollections of the Valley of the Mississippi, Letter 14.

§ 361. *Approval and illustrations of these views from Coleridge.*

An opinion, favourable to the doctrine of the durability of memory and the ultimate restoration of thought and feeling, is expressed in the *BIOGRAPHIA LITERARIA* of S. T. Coleridge, in an article on the Laws of association. In confirmation of it, the writer introduces a statement of certain facts, which became known to him in a tour in Germany in 1798, to the following effect.

In a Catholic town of Germany, a young woman of four or five and twenty, who could neither read nor write, was seized with a nervous fever, during which she was incessantly talking Greek, Latin, and Hebrew, with much pomp and distinctness of enunciation. The case attracted much attention, and many sentences, which she uttered, being taken down by some learned persons present, were found to be coherent and intelligible, each for itself, but with little or no connection with each other. Of the Hebrew only a small portion could be traced to the Bible; the remainder was that form of Hebrew, which is usually called Rabbinic. Ignorant, and simple, and harmless, as this young woman was known to be, no one suspected any deception; and no explanation could for a long time be given, although inquiries were made for that purpose, in different families, where she had resided, as a servant.

Through the zeal, however, and philosophical spirit of a young physician, all the necessary information was in the end obtained. The woman was of poor parents, and at nine years of age had been kindly taken to be brought up by an old Protestant minister, who lived at some distance. He was a very learned man; being not only a great Hebraist, but acquainted also with Rabbinical writings, the Greek and Latin Fathers, &c. The passages, which had been taken down in the delirious ravings of the young woman, were found by the physician precisely to agree with passages in some books in those languages, which had formerly belonged to him. But these facts were not a full explanation of the case. It appeared on

further inquiry, that the patriarchal protestant had been in the habit for many years of walking up and down a passage of his house, into which the kitchen door opened, and to read to himself with a loud voice, out of his favourite books. This attracted the notice of the poor and ignorant domestic, whom he had taken into his family ; the passages made an impression on her memory ; and although probably for a long time beyond the reach of her recollection when in health, they were at last vividly restored, and were uttered in the way above-mentioned, in consequence of the feverish state of the physical system ; particularly of the brain.

From this instance, and from several others of the same kind, which Mr. Coleridge asserts can be brought up, he is inclined to educe the following positions or inferences.—(1) Our thoughts may, for an indefinite time, exist in the same order, in which they existed originally, and in a latent or imperceptible state.—(2) As a feverish state of the brain, (and of course any other peculiarity in the bodily condition,) cannot create thought itself, nor make any approximation to it, but can only operate as an excitement or quickener to the intellectual principle ; it is, therefore, probable, that all thoughts are, in themselves, imperishable.—(3) In order greatly to increase the power of the intellect, he supposes it would require only a different organization of its material accompaniment.—(4) And, therefore, he concludes the book of final judgment, which, the Scriptures inform us, will at the last day be presented before the individuals of the human race, may be no other, than the investment of the soul with a *celestial* instead of a *terrestrial* body ; and that this may be sufficient to restore the perfect record of the multitude of its past experiences. He supposes, it may be altogether consistent with the nature of a living spirit, that heaven and earth should sooner pass away, than that a single act, or thought, should be loosened and effectually struck off from the great chain of its operations.—In giving these conclusions, the exact language of the writer has not been followed, but the statement made will be

found to give what clearly seems to have been his meaning.

§. 362. *Application of the principles of this chapter to education.*

Whether the considerations, which have been brought forward, lead satisfactorily to the conclusion of the durability of memory and of the possible restoration of all mental exercises, must of course be submitted to each one's private judgment. But on the supposition, that they do, it must occur to every one, that certain practical applications closely connect themselves with this subject.—The principle in question has, among other things, a bearing on the education of the young; furnishing a new reason for the utmost circumspection in conducting it. The term EDUCATION, in application to the human mind, is very extensive; it includes the example and advice of parents, and the influence of associates, as well as more direct and formal instruction. Now if the doctrine under consideration be true, it follows that a single remark of a profligate and injurious tendency, made by a parent or some other person in the presence of a child, though forgotten and neglected at the time, may be suddenly and vividly recalled some twenty, thirty, or even forty years after. It may be restored to the mind by a multitude of unforeseen circumstances, and even those of the most trifling kind; and even at the late period, when the voice, that uttered it, is silent in the grave, may exert a most pernicious influence. It may lead to unkindness; it may be seized and cherished as a justification of secret moral and religious delinquencies; it may prompt to a violation of public laws; and in a multitude of ways conduct to sin, to ignominy, and wretchedness. Great care, therefore, ought to be taken, not to utter unadvised, false, and evil sentiments in the hearing of the young, in the vain expectation that they will do no hurt, because they will be speedily and irrecoverably lost.

And for the same reason, great care and pains should be taken to introduce truth into the mind, and all correct moral and religious principles. Suitably impress, on the

mind of a child, the existence of a God and his parental authority ; teach the pure and benevolent outlines of the Redeemer's character, and the great truths and hopes of the Gospel ; and these instructions form essential links in the grand chain of memory, which no change of circumstances, nor lapse of time, nor combination of power can ever wholly strike out. They have their place assigned them ; and though they may be concealed, they cannot be obliterated. There they are, and there they always will be. They may perhaps cease to exercise their appropriate influence, and not be recalled for years ; the pressure of the business and of the cares of life may have driven them out from every prominent position, and buried them for a time. But the period of their resurrection is always at hand ; although it may not be possible for the limited knowledge of man to detect the signs of it. Perhaps in the hour of temptation to crime, they come forth like forms and voices from the dead, and with more than their original freshness and power ; perhaps in the hour of misfortune, in the prison-house, or in the land of banishment, they pay their visitations, and impart a consolation, which nothing else could have supplied ; they come with the angel tones of parental reproof and love, and preserve the purity, and check the despondency of the soul.

§. 363. *Connection of this doctrine with the final judgment and a future life.*

There remains one remark more, of a practical nature, to be made.—The views, which have been proposed in respect to the ultimate restoration of all mental experiences, may be regarded as in accordance with the Divine Word. It may be safely affirmed, that no mental principle, which, on a fair interpretation, is laid down in that sacred book, will be found to be at variance with the common experience of mankind. The doctrine of the Bible, in respect to a future judgment, may well be supposed to involve considerations, relative to man's intellectual and moral condition. In various passages, the

Scriptures plainly and explicitly teach, that the Saviour in the last day shall judge the world, and that all shall be judged according to the deeds done in the body, whether they be good, or whether they be evil.* But an objection has sometimes been raised of this sort, that we can never feel the justice of that decision without a knowledge of our whole past life, on which it is founded, and that this is impossible. It was probably this objection, that Mr Coleridge had in view, when he proposed the opinion, that the clothing of the soul with a celestial, instead of a terrestrial body, would be sufficient to restore the perfect recollection of its past experiences.

In reference to this objection to the original doctrine of a final judgment, the remark naturally presents itself that it seems to derive its plausibility chiefly from an imperfect view of the constitution of the human mind. It is thought, that we cannot be conscious of our whole past life, because it is utterly forgotten, and is, therefore, wholly irrecoverable. But the truth seems to be, that nothing is wholly forgotten; the probability, that we shall be able to recall our past thoughts, may be greatly diminished, but it does not become wholly extinct. The power of reminiscence slumbers, but does not die. At the judgment day, we are entirely at liberty to suppose from what we know of the mind, that it will exist and will clearly present before us the perfect form and representation of the past,

*See the Gospel of John, Chap. V. v. 26-28. among other passages of a similar import. "For by myself I may give life, but I cannot give it, and now is, when the Son of Man shall have the Son of Man, and they, that have died, shall live. For as the Father hath life in himself, so hath he given to the Son to have life in himself: and hath given him authority to execute judgment also, because he is the Son of Man. Marvel not at this: for the hour is coming, in which all, that are in their graves, shall hear his voice, and shall come forth, (they, that have done good, to the resurrection of life and they, that have done evil, to the resurrection of damnation.)"

so that each one shall read for himself his own sentence, and be satisfied of its justice.

We may venture to assert, that there is not only nothing in the nature of the human mind adverse to this supposition; but on the contrary, that the various facts, which have been referred to, are much in its favour. They show not merely that there is a possibility of all our past experiences being recalled, but also that there is no want of causes, by which what is possible may be converted into reality. And if that be the case, it is not necessary to suppose, as many people appear to do, that the multitude of our good and evil thoughts can be preserved and ultimately brought out, only by being laid up in the memory of the Supreme Being. The human mind itself is a safe repository. The soul of every man is a world in itself, complete in all its parts, in its laws, and powers, and experiences; which nothing but the command of its Creator can permanently sever, and annihilate.

Nor is this an unpleasing reflection. It is true, that these views add a fearful solemnity to the transactions of that great day, "for which all other days were made," inasmuch as they place in the mouths of all the wicked their own condemnation. But their tendency is to elevate the dignity of our spiritual nature, and to enhance the happiness of those, who have not sought and secured their downfall. The memory even of their former sin and unworthiness will have its value; it will tend to fill up the measure of their gratitude. The days of humanity will be contrasted with the days of spiritual life; and the dimness and restrictions of earth with the brightness and expansions of heaven. It is our present humanity, which makes our spirit weak; an angel's nature will make it strong. Freed from the encumbrances of the flesh, quickened by the presentation of the glorious objects of a higher state of being, there will be a perpetual acquisition, a going forth without retrocession, mistake, or weariness, to an acquaint-

ance with what eye hath not seen, nor ear heard, nor the heart of man conceived of.

§. 364. *Of the views and notions which are communicated by the faculty of memory.*

On leaving the general subject of MEMORY, we again deem it proper to recal to mind, that this susceptibility may rightly be considered a source of knowledge. It is certain that without this power we could not have an acquaintance with those ideas and that knowledge, which are directly connected with it; such as is expressed by the words, remember, remembrances, recollection, recalling, remembering, &c.—It may not, however, be essential to insist particularly on this, since the origin of these notions has already been ascribed to Consciousness. But if we ascribe them to Consciousness, on the ground of considering them as indicative of what takes place within and pertains directly to the mind, we may also with some appearance of truth, though for a different reason, ascribe them to the precise susceptibility, without whose existence and operations such consciousness could not have been had.

Besides the knowledge, directly connected with the exercise of the memory, it is to be considered as indispensably subservient to suggestion, to relative suggestion, to reasoning, to imagination, and, in a word, to the whole mental action. All those words and phrases, which express ideas of the past, as yesterday, last week or month or year, are expressive of notions, which could not have been possessed, in their full extent, without the aid of memory. It is true, that these notions are relative, as we have already had occasion to notice under the head of RELATIVE SUGGESTION. But evidently there would have been no opportunity for the exercise of the feeling of relation, if the power of memory had not been possessed.—Again, the memory is continually employed, and its

decisions relied upon in REASONING ; so that whatever new perceptions are directly ascribed to the reasoning, may indirectly be ascribed to the memory. And similar views will hold in respect to other mental susceptibilities.

But it must be admitted, that it is difficult fully and precisely to point out all the notions, which result from memory, as also its various applications in relation to other powers. Nor can this be surprising, when we consider, that it gives a new aspect to every thing. All nature presents a new view in consequence of memory. The dust we tread on is not, in the view of the mind, the same as it would be without that faculty ; we contemplate it not only as it is, but as it was ; as it was burdened by other plants and flowers ; as it was trodden upon by other inhabitants ; as the sacred repository of those who lived in former times. The sun in the heavens is not the same sun, which he would be, if man could not remember ; it is the sun, not of to-day merely, but of a thousand years ; it has baptized with light the foreheads of an hundred generations ; and no man of ordinary sensibility can contemplate it, without being awakened to the impressive conviction, that the same luminary shone on the bower of Adam, the ark of Noah, the tent of Abraham, the frail and tempest-tost barks of Columbus and of the Pilgrims, the stern deliberative assemblies and the battle-fields of our Revolution, as to-day he shines on the twenty four States of our glorious Union, and on all the kingdoms and empires and republics of the globe.

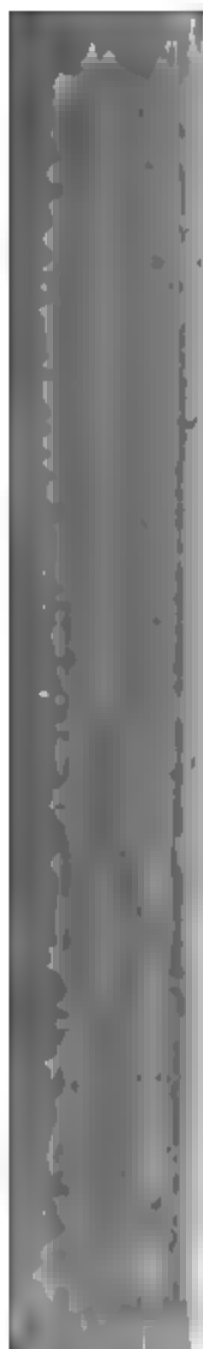
And if memory can thus give a new aspect to inanimate nature ; much more so to that, which is animate and intelligent. Look upon the man, who now stands before you ; and suppose all your past recollections to be blotted out. There is the same form and stature and expression of the countenance, but how different from the man, with whom but a moment before was associated the recollection of early life, of common joys and sufferings. of associated trials

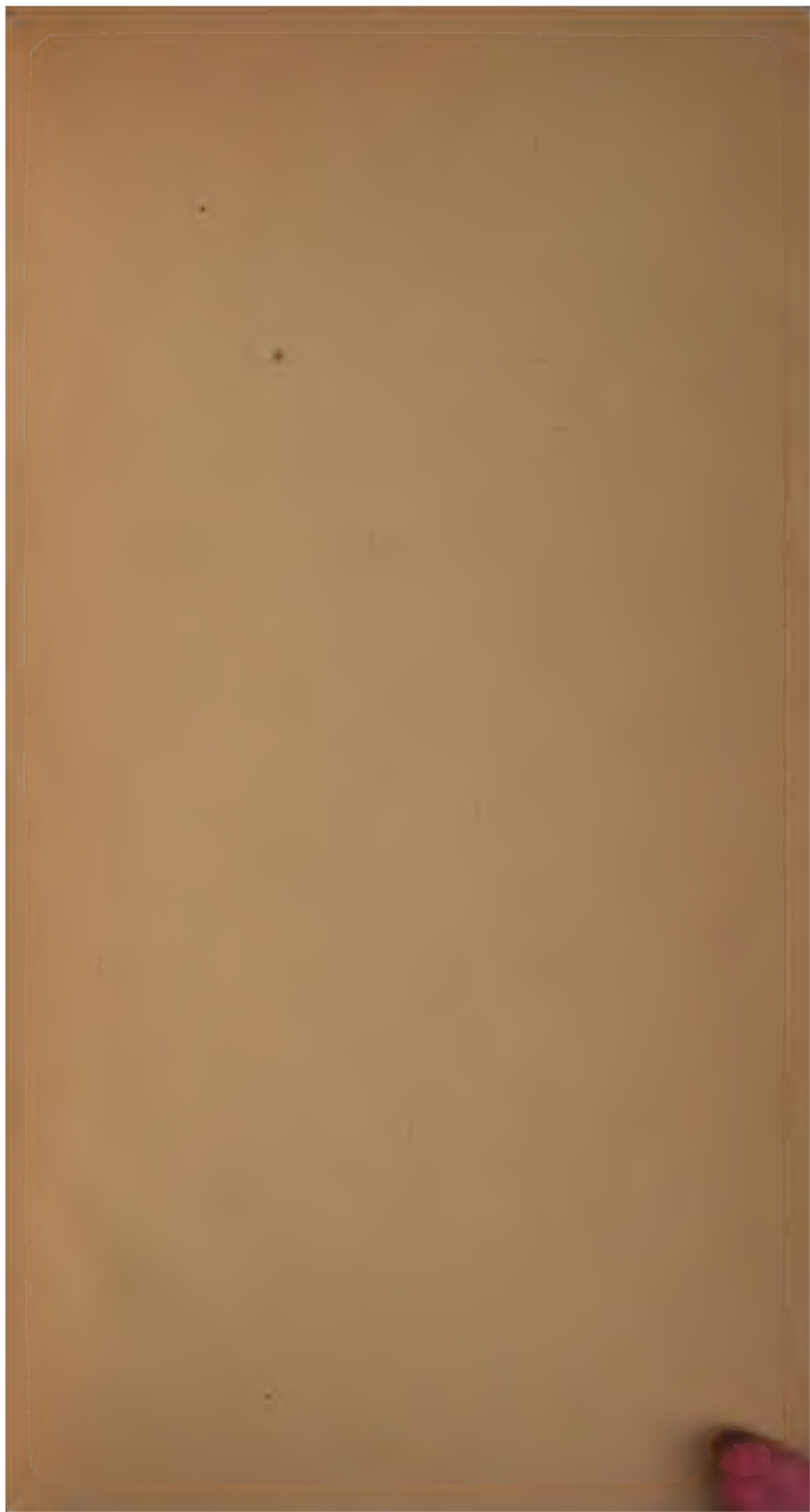
and conflicts and triumphs.—Look upon the man, who has pursued with steadfastness the interests of freedom, truth, and virtue from his youth upward ; who has been an Aristides, when the impulse of party violence threatened to sweep away the landmarks of political honesty ; who has shown himself a Washington, when the storms of war hung darkly over his beloved country ; and what a flood of glory rests upon such a person, as we contemplate him in the light of memory, and amid the illumination of departed days!

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